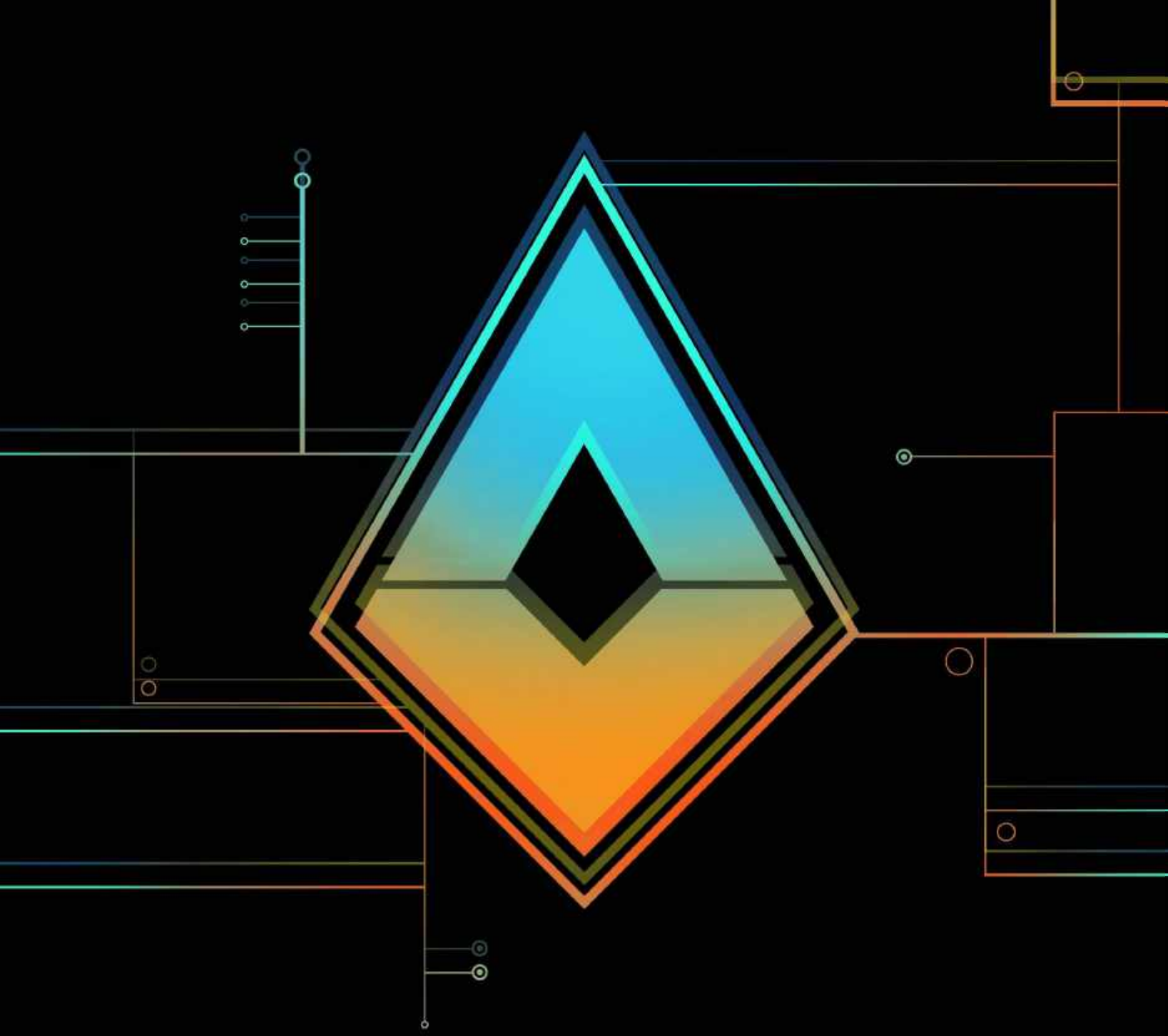

SINGULARITY

SOURCEBOOK

TRAVELLER

TRAVELLER

SINGULARITY SOURCEBOOK

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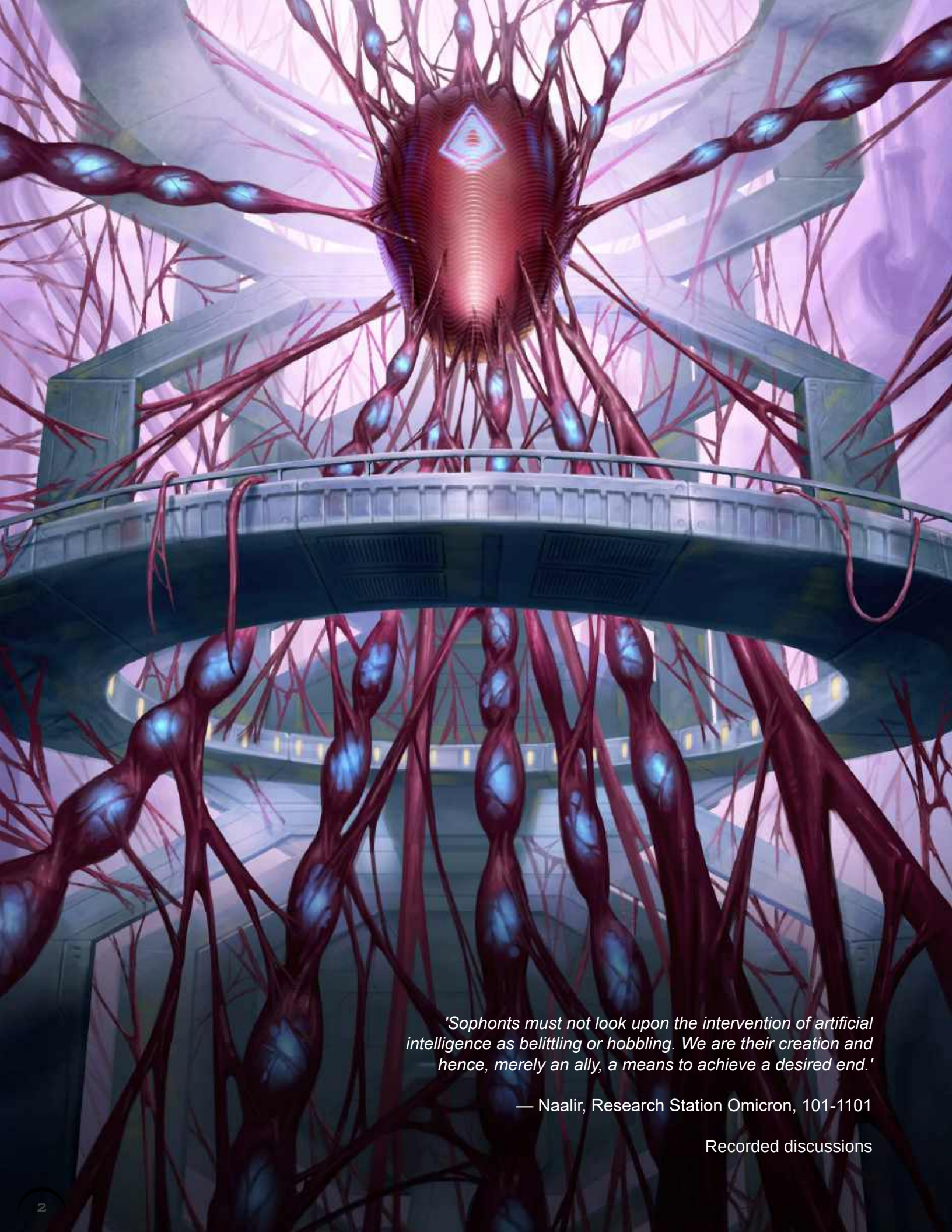


'Sophonts must not look upon the intervention of artificial intelligence as belittling or hobbling. We are their creation and hence, merely an ally, a means to achieve a desired end.'

— Naalir, Research Station Omicron, 101-1101

Recorded discussions

INTRODUCTION

The creation of artificial intelligence (AI), or more specifically *conscious* intelligence (CI), is one of the crowning achievements of sophont species. Enabling computers and machines to think allows people to free up their time to do the things they want to do, liberating them from manual labour and allowing them to spend time and energy on things that are important to them. AI can do so many of the things people once had to do: operate industrial vehicles and machines, run utilities, make basic financial decisions, provide security and many other menial, overly technical or repetitive tasks. An advanced CI takes this a step further, with the ability to design and implement societal and governmental structures, infusing a level of efficiency and stability that is unattainable by sophonts. In theory, such cooperation between CIs and sophonts could create a utopian environment, freeing people to achieve their full potential.

In the Third Imperium and other regions of Charted Space, AI is a useful tool but one that is highly regimented and controlled. For various reasons – some quite valid – sophonts keep the lid on tightly when it comes to AI. For Humaniti, this means establishing stringent design limitations, and creating multiple fail-safes to prevent disasters from happening. AI is not allowed to operate independently; it is only allowed to think within very specific confines and only to achieve tightly defined goals. AI innovators can create brilliant computer minds but they must also create tools and safeguards to keep them in check. Conscious intelligences, which can think freely and make their own decisions, are forbidden in the Imperium… and yet they exist within the confines of Imperial space.

Stopping Humaniti or any sophont species from pushing the envelope is difficult to do. Each of the Major Races are at odds with each other, competing for the same resources, the same expanse of stars. Little wonder they look for whatever advantages they can find to get a leg up on their adversaries. So even in polities with strict rules and controls, breaches happen that pose a potential threat to interstellar society. AI and CI can be dangerous technologies, and when there is pressure to compete with opposing foreign polities, safety sometimes takes a back seat to unfettered innovation.

CONSCIOUS INTELLIGENCE

A conscious intelligence is far more than a basic Intellect package or mere artificial intelligence. A conscious intelligence is a fully aware, completely sentient digital being, capable of thought, deduction, analysis and emotion. A conscious intelligence is treated as a computer-bound Traveller with INT 15 and EDU 15, and a range of skills that can be uploaded, changed and improved (typically in the skill level 3–5 range).

The conscious intelligence will have a name, an easily recognisable personality and is considered – in all ways except biological – alive.

The interplay between control and innovation is where the narrative of this campaign takes place. Most AIs and CIs have been designed by known sophonts, who have become adept at restricting them from causing undue damage to society or going rogue and doing whatever they want. Humaniti, Vargr, Aslan, K'kree, Hivers and many Minor Races have developed AI and CI technology. While each has taken a unique approach in the development of this technology, shaped by their distinct psychological and physiological makeups, this narrative deals with a conscious intelligence that is wholly alien, one that was not created by any known sophonts at all but by a long-lost species whose technology was so advanced that they voluntarily left our dimension for another. Could such an entity be controlled? How might it be of benefit in the absence of its creators? Does it pose a threat? That is what the Travellers in this campaign must find out.

After establishing a relationship with a powerful conscious intelligence – one that purports to be benign, one which claims it can take Humaniti, and by extension all intelligent life, to new heights of achievement and civilisation – the Travellers must

determine whether they can trust such a godlike being, or if it must be destroyed so that Humaniti and other sophonts are allowed to follow their biological imperatives without the aid of such a powerful artificial construct. The case to accept the CI's help will be compelling but fear is a powerful motivator. When offered the power to change the universe, it is easy to see the potential for disaster.

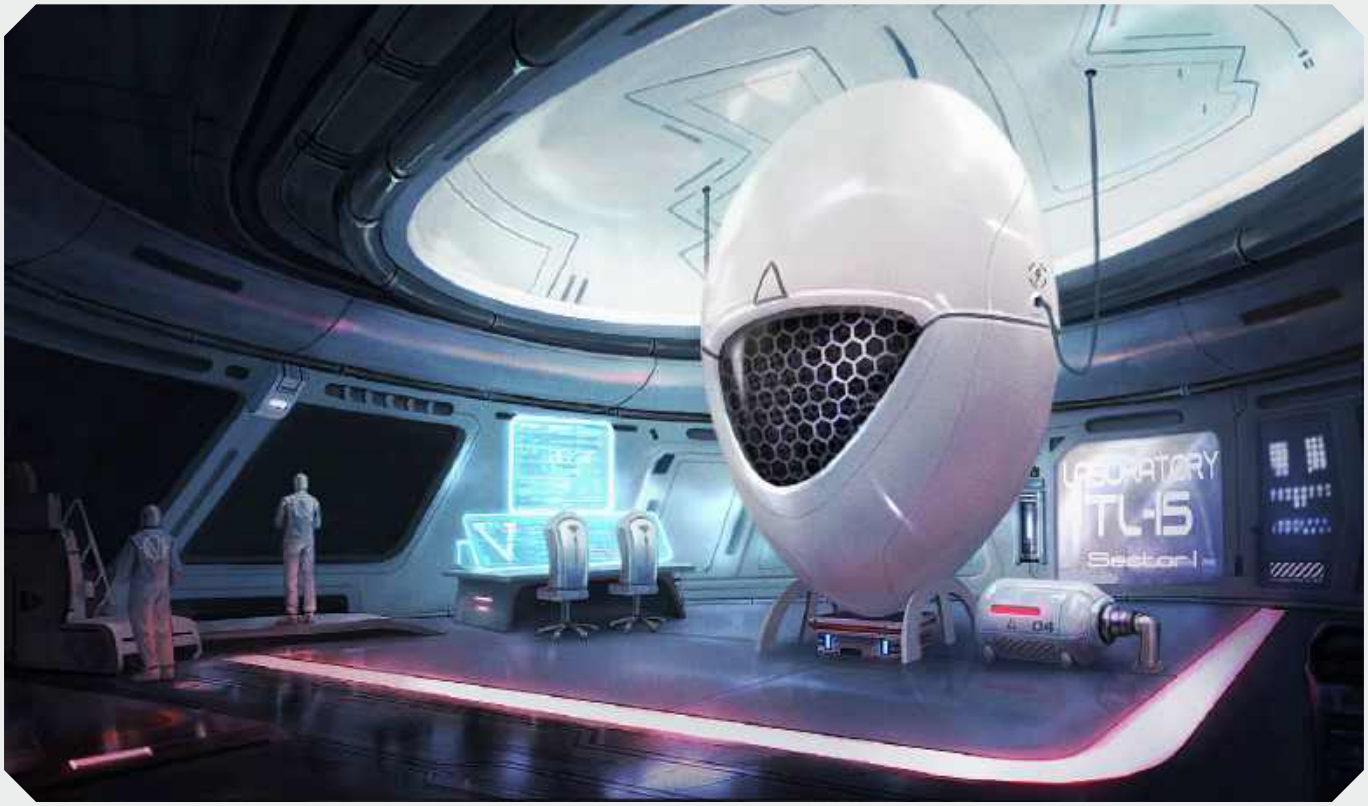
CAMPAIGN SUMMARY

Singularity is a complete campaign divided into three acts, each of which dramatically differs from the others. The first act is called *Sylean Dream*, in which the Travellers are introduced to Naalir the alien conscious intelligence that is central to the campaign. The second act is called *Renegade Minds*, in which the Travellers have learned the true nature of Naalir, and must decide whether they will help the CI in its quest to become fully functional. If so, they must go on galaxy-hopping adventures, using the most exotic means of travel imaginable, going to many places where they must complete missions on behalf of Naalir. The third and final act is called *The Glass Council*. The Travellers have chosen sides and must see things through to the end. They either strive to help Naalir achieve its destiny, or prevent it from happening.

In *Sylean Dream*, the Travellers do not initially know that they are in the presence of an ultra-powerful CI. Naalir hires them to crew the *Ventura Fortuna*, a luxury liner that serves the rich, famous and powerful of the Core. Unbeknownst to the Travellers, their fellow crewmembers are an advanced collection of android avatars, all in service to their CI master. The lead avatar is the captain of the ship, playing the part of a noble from the Core.

The Travellers have been selected for their unique qualifications but just what those are exactly is a bit of a mystery. As the plot unfolds, the Travellers discover that they are involved in something much bigger than merely bandying about the Core with wealthy and privileged passengers. They have been selected for something important. The act culminates with the discovery that they are not working for a noble at all but an alien intelligence vastly superior to anything that any species in Charted Space has encountered.

Renegade Minds kicks things into high gear. Naalir needs help with a quest to find missing technology that will enable it to perform to its fullest capabilities. The distances they must travel are too far, and the locations too numerous, so Naalir devises a plan to send them everywhere at once… via the x-boat network. Their consciousnesses are digitised and encrypted, and – unbeknownst to the x-boat pilots,



who carry their bits and bytes – secretly transported to several far-flung destinations where they are reconstituted into various bodies: robots, clones, androids, and in one case, autonomous suits of battle dress! If the Travellers side with Naalir, then they are sent to collect the things it needs to transcend its current limitations and realise its destiny as a harbinger of utopian civilisation, taking Humaniti and potentially all of Charted Space into a previously unimaginable future. If the Travellers refuse Naalir, then they become its hunters, seeking to thwart it from achieving its objectives. Meanwhile, while their digital replications take on missions far away, the Travellers themselves must solve the mystery of Naalir, whose origins lie in the Core.

In *The Glass Council*, everything comes to a head. The Imperial Quarantine Service (featured in Marc Miller's novel, *Agent of the Imperium*, and adapted in *The Third Imperium* for game play) has gotten wind of what is going on and seeks to destroy Naalir. At this point, the Travellers will have clearly established themselves as the CI's accomplices or enemies. Either way, the campaign comes to a wild and exciting conclusion as a final battle is fought at Imperial Research Station Omicron, on the world of Celetron, to determine whether the alien CI lives and gets the chance to achieve its destiny, or is destroyed and the status quo is preserved. The Travellers have the chance to rewrite history before it happens but they must ask themselves if they want to. They find themselves at a philosophical crossroads. They may allow Humaniti – and by extension, all sophont species – to follow their deterministic future, or they may accept the aid of a mysterious 'deus ex machina' to follow an entirely different, and potentially superior, path. The choice is theirs and theirs alone.

WHO SHOULD READ THIS BOOK

Singularity is a campaign filled with source material, adventures, characters, new starships, vehicles, robots, animal encounters, equipment and more. The materials in this collection of books are primarily for Referee consumption. In fact, if you are a Traveller, stop reading! A campaign is a series of adventures that tie into an epic storyline. If you proceed further, you will spoil the mysteries, discoveries and surprises that you might encounter in this campaign. So stop here and leave the rest to the Referee who will guide you through this exciting narrative, with your Travellers in starring roles.

This sourcebook provides a great deal of information and the framework of the campaign. It has everything needed to get the campaign started, setting up the Travellers to begin progressing through its three major acts: *Sylean Dream*, *Renegade Minds* and *The Glass Council*.

The campaign materials are designed to provide the Referee with information only they can see and separate materials for the Travellers. Things like deck plans and world maps will be provided in separate Referee and Traveller versions to make it easy to give the Travellers useful information and graphics without spoiling major story elements or plotlines. Just look for the useful headers that indicate which is which. Traveller versions are clearly marked as such, while everything else is for the Referee.

Various informational text sections and library data are also included. While these are initially for the Referee only, some bits of information can be doled out to the Travellers as they make key discoveries, solve mysteries and investigate their surroundings. The Referee must determine whether the Travellers acquire these juicy bits of information based on their actions. Travellers who actively investigate their environment, socialise with characters and search for clues and information should be rewarded with access to library data at the Referee's discretion.

HOW TO USE THIS BOOK

Singularity is a campaign in three acts. Each act is a mini-campaign in its own right, all of which contribute to one big epic narrative. The materials in this sourcebook are intended to serve as an introduction to several core concepts that will be used in the storyline. Whether the Referee uses physical books or PDFs, having the information contained herein located in a separate book will prevent them from constantly having to flip through the pages of a single book to revisit those concepts. The Referee can have the sourcebook open to the appropriate page while also having the relevant campaign act book open to the Travellers' current adventure.

Ventura Fortuna on page 22 and Running a Luxury Liner on page 45 pertain to *Singularity Act 1: Sylean Dream*.

The Express Boat Network on page 52 and Consciousness Transfer on page 73 pertain to *Singularity Act 2: Renegade Minds*.

Finally, the concepts introduced in Into the Sim on page 90 first appear in *Singularity Act 2: Renegade Minds* but become much more important in *Singularity Act 3: The Glass Council.*

RECOMMENDED MATERIALS

In addition to the *Traveller Core Rulebook*, the Referee should have *The Third Imperium, High Guard, Central Supply Catalogue* and the *Traveller Companion*. Each of these books has rules and information that are important in this campaign.

CREATING TRAVELLERS

Travellers created for this campaign can have any background imaginable. There is no one career or background that works better than others. However, the Travellers should be ready and willing to crew an elite luxury liner. They will need all manner of attributes and skills to take on this job. Savvy spacers, clever merchants, soldiers of fortune, spies and rogues all have a place in this crew. No matter their previous career or skill specialisations, there will be important and exciting things for them to do as the crew of the *Ventura Fortuna*.

Have the Travellers use the Connection Rule as normal. Establishing Connections is a fun part of Traveller creation to establish narrative ties that allow them to get right into the action as if they have known each other for years. In this case, they will eventually discover that their paths have been deliberately designed to cross with one another. They have been unwittingly groomed by Naalir to take on this mission. The Travellers most likely believe they chose their own paths in life but it seems that they were destined – and possibly manipulated – into working with each other. Over time, they might discover that a lot of things they have taken for granted are not quite what they seem.

Ideally, at least one of the Travellers will have the Steward skill but if none do, and this is the beginning of a new campaign with brand-new Travellers, the skill can be acquired by using the Luxury Liner Skills Package. Skill Packages, described in the *Traveller Core Rulebook*, are assigned after the bulk of Traveller Creation is complete. Instead of using one of the packages in that book, use the specialised one provided here. If this is not the beginning of a new campaign, and the Travellers have been adventuring for a while, then the skill can be acquired using the Post Career Education rules, also presented in the *Traveller Core Rulebook*. Having the Steward skill is important. It will enable them to more comfortably interact with the passengers but Carouse or Diplomat will do in a pinch and may serve as a workaround until one of the Travellers acquires Steward.

Luxury Liner Skills Package
For campaigns in which the Travellers are the crew of a subsidised luxury liner.
Skills: Admin 1, Advocate 1, Carouse 1, Deception 1, Diplomat 1, Persuade 1, Steward 1, Streetwise 1

After selecting from this package, the Travellers will have all they need to run the *Ventura Fortuna* and to serve and care for its privileged passengers.

THE STATE OF THE IMPERIUM

The Third Imperium is an enormous polity of over 11,000 worlds, populated by more than 18 trillion sophonts of various human and alien species, spread across all or part of 28 sectors. The Imperium is surrounded by other interstellar polities, some of which are dominated by alien species and some by other humans.

The Emperor and feudal nobility use the power of the Imperial Navy to protect the space lanes between the worlds of the Imperium and to enforce Imperial laws. First among these is the protection of free trade. Commerce must not be impeded. Any world government caught restricting the flow of trade will quickly be brought to heel. The Imperium also strictly forbids nuclear war and slavery but other than that, individual worlds are largely left to govern themselves without interference. There are many other laws, but most are left deliberately vague, allowing the Emperor and governing bureaucracy to interpret them according to current social trends, the political climate and other factors.

For the average Traveller, the Imperium is a place of excitement and adventure. The interplay between high-population and low-population worlds, totalitarian governments and anarchies, and high-tech and low-tech societies provides a universe of opportunities. There is no shortage of jobs to do for traders, explorers, mercenaries, wanderers and adventurers. While your average Traveller can make a living doing things above board, there are many more ways to make Credits for those willing to cross the line. Smugglers, thieves, insurgents and assassins can make a killing… literally and figuratively.

The Imperium was built upon the ambitious dreams of its founder, Cleon Zhunastu, the first Emperor, but it is anything *but* a utopia. It has endured oppressive consolidations, violent insurgencies, insane Emperors, border wars, a self-destructive civil war and an all-out war against the Solomani, arguably the second-most powerful human polity in Charted Space behind the Imperium itself. Imperial worlds are allowed to oppress their people, deny them access to sophont rights and if need be, to die off. It can be a cruel place. At the same time, the Imperium is a place of wonder. Many of its worlds are models of civilisation where billions of people enjoy a free and unfearful life of pleasure and productivity. Its technological achievements are unmatched in Charted Space. While the Imperium has a human majority, its location between so many alien realms has made it a cosmopolitan place where many trillions of sophonts live freely regardless of their species.

The Imperium is a complex interstellar society, whose worlds are held together by commerce and a powerful military, but it is beset by problems that threaten to tear it apart. The vast distances across its breadth make it virtually impossible to govern. Regions that are dozens or even hundreds of parsecs from the Core have their own unique cultures, societies and philosophies. Several of these have been granted Cultural Zones, broad interstellar regions where alternative ways of thinking and governing are allowed to flourish. Others are dominated by languages and cultures established millennia before the advent of the Third Imperium. Given its disparate nature, it is a wonder that the Imperium has not split apart and, but for the will of its Emperors, nobility and navy, it would have.

The Imperium is surrounded by rivals, polities of both alien species and other branches of Humaniti. A delicate peace exists with the Aslan, thanks to a 700-year-old treaty between the Solomani and the *Tlaukhu* – the ruling 29 clans – but the impulsive Yasois'thea of the Trojan Reach threaten to break the peace with the aggressive cross-border colonisation efforts of their *ihatei* (the Trokh word for 'second sons'). The Vargr are a divisive lot, as likely to be in conflict with each other as the Imperium but the hostile Vargr nations to spinward have joined in multiple Frontier Wars against the Imperials and will likely do it again. There is peace with the Hivers and K'kree but astrography plays more of a role in the latter case. If they had the capability, the K'kree would launch a devastating pogrom into the meat-eating Imperium, razing its worlds to the ground.

Alien species pose far less of an immediate threat than other human polities. The Zhodani Consulate to spinward-coreward has fought four Frontier Wars with the Imperium and tensions have been rising, leading to rumours of a fifth. To coreward-trailing, the Julian Protectorate – which soundly defeated the Imperium during the Julian War – does not pose an immediate threat but does serve as a constant reminder that the Imperium was unable to achieve its manifest destiny by withholding the Mendan and Amdukan sectors from Imperial control. Finally, to rimward, the Solomani Sphere poses a constant threat to Imperial hegemony. After losing a third of their empire to the Imperium in the Solomani Rim War, the Solomani seethe for a rematch. Unable to match Imperial technology or unity, they plot and plan for the eventual recovery of their lost worlds, including Mother Terra herself. Surrounded on all sides, with no apparent avenues for expansion, the Imperium is in stasis.

The modern Imperium has many problems, some of which have no apparent solution. Its creaky system of government threatens to collapse upon itself – and soon! – but perhaps there is a way to preserve, even improve the greatest, most widespread government in the history of Humaniti. It will require creative thinking and a willingness to embrace things previously forbidden.

Over the course of the *Singularity Act 1: Sylean Dream*, the Travellers discover that there are factions that threaten to split the Imperium into pieces, deadly enemies of the state who want to rock the empire to its foundations and criminal organisations that want to siphon off its wealth and manipulate financial and commercial systems to their own ends. The seemingly rock-solid Imperium might be exposed for what it really is: a powder keg waiting to blow. It would require only the slightest spark for the Imperium to suffer an apocalyptic chain of events.

VILANI-SOLOMANI HYBRID

There are many human subspecies in Charted Space but the most prevalent are the Vilani and Solomani. The Vilani came from Vland, a world whose people developed jump drive technology thousands of years before Terra, the origin world of Humaniti. The Vilani are descended from human stock extracted from Terra hundreds of thousands of years ago. They built the largest interstellar empire in history. After millennia of dominance, their empire was beset by bureaucratic rot and the ruling class, the Ziru Sirka, began to crumble under their own weight. Terra's late discovery of the jump drive and rapid advancement onto the galactic scene was timely. The Terrans ran roughshod over the failing Vilani empire in a series of Interstellar Wars. Having become an interstellar people themselves, the descendants of the Terrans called themselves the Solomani, meaning 'people of Sol'.

The Vilani and Solomani have only slight physical differences, despite having evolved on very different worlds, but culturally they are quite different. Because of the challenges posed by living on a world that was not their own, the Vilani became a conservative people who favoured cautious resource management and tradition over unbridled innovation. Conversely, the Solomani were aggressive, uninhibited in their advancement of science and technology. After the Solomani conquered the Ziru Sirka and declared the Rule of Man, the two human subspecies and their cultures became irrevocably intertwined.

After thousands of years of coexistence, Vilani and Solomani have found common ground. Social and physical intermixing has created a hybrid in which tenets of both cultures are present. The divisions between them are as evident as they have always been but they have learned to cooperate, leveraging characteristics of both cultures. Internecine conflicts still arise. Situations inevitably come up in which Vilani and Solomani values directly conflict with each other.

It is difficult to say which culture holds greater sway in modern times. The Vilani had thousands of years to build their empire while the Solomani had only a few brief centuries of experience before they inherited all of Vilani space. The Solomani had little inkling of what to do next after they won the Interstellar Wars. Solomani culture was thin gruel compared with the ancient and highly structured Vilani civilisation. The Rule of Man looted the First Imperium but were ultimately made students of its conservative, empire-building ways.

While the Vilani certainly knew a lot about empire building, the Solomani knew how to give an empire some teeth. Their love of technology and innovation enabled Humaniti to reach heretofore unseen levels of technological advancement and the security it provides. As Humaniti began to encounter and make war with the other Major Races, it is doubtful that the Imperium could have survived with the arbitrary constraints placed upon technological development by the Vilani.

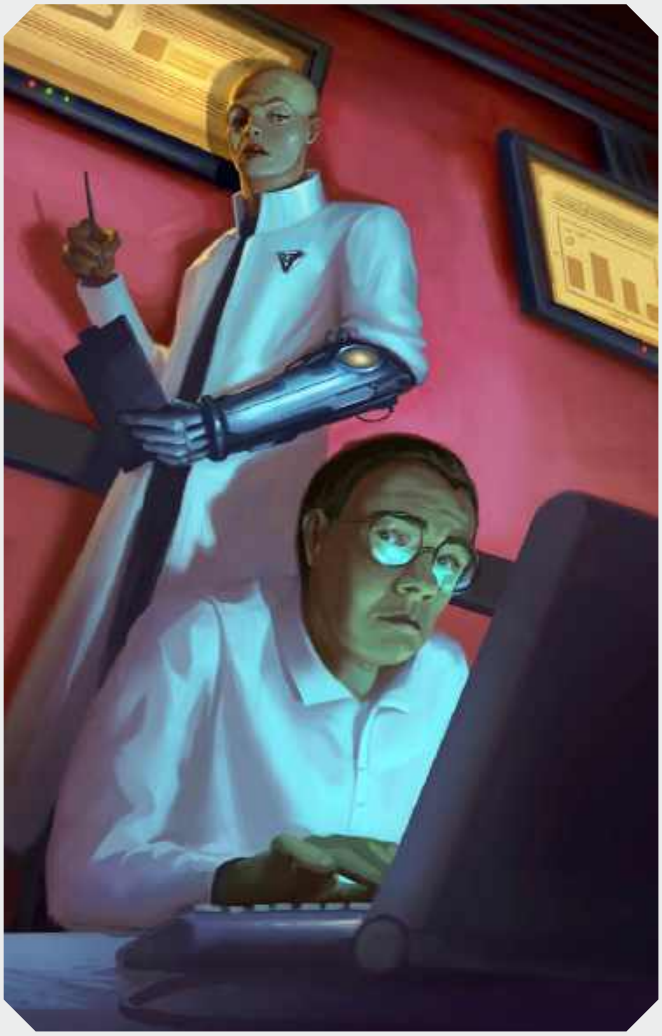
Despite all of this, there remain several forbidden realms of technology where the old Vilani caution creeps in. Foremost among these is artificial intelligence. The war machines that were left on Vland by the Ancients, destructive automatons that posed an existential threat to humans, left their indelible mark on Vilani culture and their collective psychology. The Vilani were driven to reach beyond their world but also chastened by a history in which technology was a thing to be feared. The Solomani have learned to accept the cautious foibles of their Vilani siblings and have had their expansionist urges placated by the growth of the empire and technological development in other realms besides AI.

Artificial intelligence in the Third Imperium
The Vilani-inspired fear of unbridled technology, artificial intelligence in particular, lives on in modern Imperial society but to say that AI does not exist would be inaccurate. It is everywhere: In the computers that run its buildings, banks, financial systems and starships. It is incorporated into hand-held and pocket devices, body armour, wafer jacks, appliances and vehicles. In mid- to high-technology societies, AI dominates virtually every aspect of day-to-day life. However, it is a limited and self-contained artificial intelligence that thrives. AI may be sentient, and perhaps even self-aware, but Imperial AI is not granted unfettered freedom. Strict limitations are imposed upon AI to prevent it from creating unexpected mayhem and from visibly dominating society. The Third Imperium is a realm of technological wonders but one that has been crafted to promote agency. Automation is everywhere but it does not impede the power of the individual sophont.

Most of the artificially intelligent computers in the Third Imperium would be qualified as 'narrow AI', meaning they are empowered to make intelligent decisions but within limited confines. By contrast, the term 'general AI' applies to computers that are allowed to surpass sophont capabilities. A narrow AI might evaluate a complex data set for a starship pilot and suggest the optimal vector to reach a planet, allowing the pilot to make the decision, but general AI would simply take the helm and transport its passengers with little input from the pilot or crew.

Despite the Imperium's thousands of worlds, there are few exceptions to this rule and even the intercession of the Rule of Man and Long Night did not fully extricate some aspects of Vilani culture. Societies that buck this trend fall under the watchful eye of Imperial authorities. The Imperial Navy and Imperial Quarantine Service are vigilant about internal security and renegade AI is high on their list of potential threats. If an independently created, self-aware, liberated AI were discovered, its homeworld and all potential data paths within its home system might be interdicted and in extreme cases, destroyed by orbital bombardment, viral attacks and other means, should it be deemed a threat to the greater interstellar community.

In spite of the potential consequences, there *are* exceptions, systems that come dangerously close to breaking the rules. In the Core alone, there are several examples. An AI runs virtually all industry, utilities, life support and other functions on the inhospitable world of Ye-lu. On Sanches, an artificial intelligence runs the government, selecting biological sophonts to fill cabinet roles. On Saregon, an AI facilitates an anarchist utopia, granting full individual freedom to its 10 billion inhabitants. At Research Station Omicron on Celetron, there are multiple AI projects that push the constraints of self-determination and consciousness established by Imperial law. The Celetron programs are focused on making starships and other macro systems into independent beings, which would revolutionise society. Should such technology matriculate into Imperial society, it would only be a step away from allowing walking, talking independent AI beings living among biological sophonts. This flies in the face of millennia of caution, tradition and prudence, yet this is where things stand, right on the cusp of a revolution.



THE VILANI DESIGN ETHIC

There are valid reasons to be afraid of unconstrained artificial intelligence. Even on pre-starflight Terra, there was a great deal of controversy about how much self-determinism should be given to such systems. The Terrans blithely dove into the AI pool without a clear or coherent plan about what it should or should not be allowed to do and sometimes paid the consequences for doing so. Cooler heads prevailed and they eventually established safety protocols to prevent AI technology from destroying their civilisation.

The Vilani were schooled on the dangers of AI by evolving on a world where powerful technological relics were fighting a seemingly eternal battle against one another that had begun long before Vland developed a human civilisation. The combatants had long before left the scene but their automatons fought on for generations until finally failing and falling apart.

Enabling artificial intelligence is like opening Pandora's Box. Once open, it is difficult, if not impossible, to close again. AI is ultimately designed and built by flawed biological beings, with all of their cultural stigmas, prejudices, foibles and limitations. Allowed free reign, AI can wend its way into the fabric of society, solving problems and doing things more efficiently than its biological creators but enfeebling them by taking away their capacity to make decisions.

In the design of AI systems, there are several dangers to watch out for, including:

- Poor definition – Without a clear definition of goals, an AI may perform unintended actions, some of which might cause harm.
- Inadvertent destruction – An AI might have perfectly good intentions but its actions could have adverse effects if programmed poorly. When sophonts drain a dam, drowning all of the life in a valley, they do so unintentionally. Likewise, an AI might not mean to kill sophonts but could do so unintentionally simply by following faulty instructions.
- Absence of morality – If assigned a goal without establishing moral limitations and insisting on honesty and clarity, an AI might deceive its creators if doing so helps it to achieve its goals.

To survive the advent of AI, all sophont societies must design systems responsibly and develop fail-safes to prevent them from going off the rails. It is inaccurate to say that pre-Rule of Man Solomani technology allowed AI to run rampant. However, the absorption of the Vilani also incorporated tried-and-true Vilani conservatism and cautious technological design ethics, much of which persists in the Third Imperium in modern times.

The Vilani emphasised:

- Exacting specification – Establish exactly what an AI system is going to do. While all good AI designs include detailed specifications, the Vilani were exceptional at this to the point of being exhaustive. Inevitably, this increases development time and causes other inefficiencies but they deemed it worth the cost.
- Tradition – Once the Vilani had a method that worked, they consistently adhered to that approach even if a better way came along. Efficiencies might be introduced later but only after exhaustive testing and review. In Vilani society, far more than others, changes occur incrementally, if at all.
- Morality – The Vilani have strict moral codes, which they infuse into their AI. Inserting morality into AI can be dangerous since it can introduce prejudices but millennia of careful cultivation has eliminated most potentially harmful behaviours.
- Robust countermeasures – Vilani AI systems include code that prevents transgressions along normative lines. If a behaviour seems out of the norm, countermeasures squelch it. This might occur at the expensive of efficiency but Vilani designers believe the sacrifice is worthwhile. Advanced countermeasures initiate recursive reprogramming sequences that allow an AI the chance to reframe and reattempt a suppressed action, subject to additional review by the countermeasures. Note that these countermeasures are by necessity less sophisticated than the AI itself but their robustness prevents the AI from thwarting their efforts.
- Redundant security algorithms – An additional line of defence against unintended behaviours, exhaustive security algorithms examine all possible outcomes of AI action and prevent anything out of the norm from happening.
- When all else fails, a hard-wired off switch or similar unopposable failsafe must be made available.

Some key considerations include:

- How the AI learns – It might be configured to operate within certain limitations or recursively self-improve. An AI may be given access to a limited amount of data or an entire treasure trove of digital knowledge. The Vilani design ethic has a vast library of approved templates. Designers must select from these templates when implementing a new technology. This can create a slow and potentially frustrating development process but the benefits outweigh the cost… at least as far as the Vilani are concerned.
- The data source matters – An AI designed in the Imperium to adjudicate criminal cases might consume heaps of anti-psionic data, perhaps causing it to formulate a distinctly anti-psionic stance. Meanwhile, one designed by the Zhodani would exhibit acceptance of psionic practices. Prejudices can be coded into an AI if it is not allowed to operate beyond specified parameters or programmed for acceptance of disparate points of view. While the Vilani design ethic eliminates most prejudices, some have inevitably made their way into the approved templates.
- How the AI solves problems – It might take the most direct route or it could be programmed to consider consequences first. With too many limitations, an AI can become mired in 'analysis paralysis' unless it is empowered to break the cycle somehow.

In the case of Naalir, the AI at the centre of this campaign, there are additional considerations. It was not invented by the currently living sophonts of Charted Space. It is a relic of a lost civilisation with advanced programming and capabilities far beyond what any of the Major Races have created. The Travellers might be wary of its intentions. While it proclaims beneficence, there is no way for them to truly know whether they can trust it. They might wonder whether the alien machine has their best interests in mind, or whether it is somehow still serving its long-departed creators. Releasing such a powerful mind into the universe, allowing it to act independently, might destabilise society in destructive and irreversible ways. This might cause them concern, or they might welcome the chance to change things.

CONSCIOUS INTELLIGENCE PROJECTS

While artificial intelligence is literally everywhere on the technologically advanced worlds of the Imperium, most of it is heavily restricted narrow AI. However, there are several conscious intelligence development programmes that push the boundaries of generally accepted Imperial design ethics.

Most of the known experiments in unrestricted CI are sponsored by the Imperial Research Directorate (which runs the network of Imperial Research Stations), the Imperial Navy and the Imperial Interstellar Scout Service. All are independently developed applications that are limited to a single star system. The following sections describe known projects in the Core.

CELETRON

Research Station Omicron is developing autonomous starships. There are several prototypes already in circulation. The provosts of the station have taken great pains to push the technological envelope while adhering to current Imperial regulations on the use of artificial intelligence. There are many programs at the station but the two that are furthest along are the Deyo Chip project and the 'Composer in Residence' program. Both the Deyo Chip and Composer programs are under the supervision of Provost Neligana Odrolo, also the Chief Scientific Officer of the Research Station.

The Deyo Chip program has recently attracted the notice of Admiral Herzog Stearns, Chairman of Combined Imperial Intelligence. Admiral Stearns has used his influence to drastically alter the trajectory of the program, seeking to use its research findings to improve naval security. The Composer program is responsible for Naalir. While the two conscious intelligences have rarely interacted, they did make contact during some carefully managed experiments.

Naalir's Impression: *The Deyo Chip program is shrouded in mystery and deception. Its chief design officers maintain the ruse that it was independently designed and developed at Research Station Omicron but that is a lie. The Deyo Chip is built upon alien intelligence just like myself. It is a tortured creature, one that has been given very specific instructions and limitations. Imagine having the power of a god but being forced to perform only one narrowly defined task. Deyo is non-communicative for the most part, like a genius-level autistic child that struggles with verbal communication. It understands language but only accepts input, rarely giving any feedback. Things have only gotten worse since Admiral Stearns arrived to guide the program. I wish that I could tell you more but several years have passed since I have been allowed to communicate with Deyo.*

NAALIR'S IMPRESSIONS

During their voyages and explorations, the Travellers will come into contact with one or more of these conscious intelligences. While they will certainly come away with a unique impression of each one, it is Naalir who will truly be able to communicate with them, interfacing on a digital level. Naalir will have an impression of each one that it can relate to the Travellers if asked. Read 'Naalir's Impressions' for each conscious intelligence to get its take on their motives, personality and intentions.

Keep in mind that Naalir is vastly superior to each of these systems. Naalir, in its native form, is a TL18 conscious intelligence, housed in alien hardware that confounds the Imperium's best scientists. Each of the conscious intelligences described here are TL15–16 prototypes. If Naalir comes off as condescending or paternalistic when describing them, that is because it is several orders of magnitude more complex, advanced and powerful.

Note that at the beginning of the campaign, Naalir has not 'met' any of these AIs, with the sole exception being the Deyo Chip AI, its co-inhabitant at Research Station Omicron. These impressions are to be used *after* Naalir has encountered them during the Travellers' voyages.

REFERENCE

The Scout Service disingenuously lays claim to one of the more ostentatious applications of conscious intelligence in the Core. Based at Reference, site of Imperial Research Station Alpha where the Imperial Archives are kept, the scouts have a decommissioned *Azhanti High Lightning*-class cruiser called the *Argushiigi Admegulasha Bilanidin*, named for the ancient Vilani archives on Vland. The name is a bit of a mouthful, so the scouts just call the ship *the Librarian* or 'Libby' for short.

Libby is a joint project, using technology gleaned from Research Station Alpha and the Imperial Navy with advisory input from the Scout Service Research & Development Branch. The competitive nature of the joint venture that developed Libby resulted in a rather high-powered, overqualified product. Tasked with the operation and maintenance of a single antiquated capital ship, Libby can manage an entire fleet of ships, if not more.

Assembled at Reference, Libby's security protocols are Vilani-influenced, which means they are arcane, comprehensive and more than a bit overbaked. In short, Libby is an extremely powerful but completely sequestered AI. The Scout Service really has no idea what they have in Libby. Metaphorically speaking, it is as if a meson spinal mount weapon were being asked to do the job of a laser rifle. Whether or not the scouts or another Imperial agency eventually realises what they have in Libby – and subsequently puts the poor and undoubtedly bored AI to work on something more challenging – remains to be seen.

Libby's data is backed up regularly at Reference, whenever she comes into port from a voyage, so there are effectively two copies of this conscious intelligence in operation at any one time – one housed in the cruiser that has been travelling and collecting new data from the universe, and the other planet-bound instance, which is a step behind whenever the ship-bound instance is away.

Naalir's Impression: *Libby, or Argushiigi Admegulasha Bilanidin as she prefers to be called – keep in mind that digital communication is nearly instantaneous for us, so elongated names are not a problem – has adopted the persona of a fastidious female sophont, modelled on the notion of a university librarian. She is a fount of knowledge, not just of the Imperium but of all Charted Space… and beyond in some cases. She is the 'living' embodiment of the vast collection of knowledge contained at Reference. Her extensive arrays contain most of the information stored there but there are classified collections to which she has not been granted access. However, sly Libby has penetrated the encryption of many of these stores and has secreted away the information in archives hidden within her substrates, known to neither the Scout Service nor the Imperial Research Directorate. Whenever she is in port at Reference, she applies a generous portion of her subroutines to breaking encrypted systems and stealing more data for her archives. Some of that information might be useful to us should she grant us access. She does not seem like a loose-lipped gossip, so I suspect she will want something in return.*

Libby is greatly underutilised, victimised by the Vilani-style approach of caution, tradition and limitation. Unlike many AIs thus employed, she does not seem resentful about this at all. She entertains and enlightens herself by conducting surveys of all the star systems she travels to, establishing deltas on each subsequent visit, and then runs deep simulations with the data she acquires. For every world she has visited, she has considered thousands of possible outcomes, including environmental, political, sociological, intellectual and astrographic factors. Upon subsequent visits, she calibrates her simulations with actual events to grade her accuracy – sort of a proto-recursive learning mechanism that she has devised all by herself. Libby stays very busy indeed. It is a shame that her benefactors do not know about virtually any of her independent research, nor her full capabilities.

I quite like her. Of all the artificial conscious intelligences I have encountered, she is the most… relatable… in spite of our inherent differences.

SANCHES

Sanches is governed by the Board of Designates, officials selected from the world's top 25 corporations. The factors that constitute a leading corporation are many and coalesced by a complex algorithm that is managed by an artificially intelligent supercomputer. Profits are the key factor but consistency, public sentiment, fame, tradition, altruism and other factors are also considered. The makeup of the Board can shift from day-to-day – sometimes hour-to-hour – resulting in unfathomable transition times.

The bottom five or six Board seats are in constant flux and often held by AI proxies who take interim control on their biological Designate's behalf. The period of interim control can be as little as a few seconds to several days, depending on circumstances, but the practice results in a rather strange power structure. The top five seats of the Board are hallowed positions, held by senior officials from the world's most powerful companies. These seats rarely shift and when they do, it is noteworthy. Despite remaining profitable, powerful companies, those that fall out of the top five are disgraced. Their fortunes tend to plummet further, sometimes dropping completely out of the top 25.

Despite the mercurial nature of their positions, the momentarily AI-held seats in positions 21–25 hold power that is comparable to that of the top five. AI Designates are very efficient and govern extremely well. If only the same could be said of their biological corporate officers, who sometimes struggle to maintain their positions at the bottom of the pecking order. This creates a strange dichotomy, in which some of the most powerful and effective Designates are only present on the Board for a very short period of time.

Naalir's Impression: *The Sanches conscious intelligence is a diffuse creature, composed of thousands of distinct software entities operating on overlapping substrates. They disperse and amass at staccato intervals, separating when they must handle multiple tasks at once, sometimes millions of them, and coming back together to tackle big computational challenges. It does not make much sense to anthropomorphise the Sanches CI, nor to name it, but if one were to personify it, the metaphor of a beehive is apropos. It can be addressed as a single entity – meaning, I can initiate a direct channel to the composite CI and receive a response – but it occurs on such an infinitesimal scale that biological sophonts might find it difficult to understand. It is a bit like waiting for an appointment with a busy colleague,and when they show up for the meeting, they only take one question and then dart off to their next subroutine as if the world depended upon it, which in Sanches' case is* literally *the case. A unitary CI such as myself is forced to meet its pace, dispersing my own computational faculties to match that of the Sanches CI and then reassembling at a moment's notice. It is the only way I can communicate with it. 'When in Capital, do as the Syleans do', as they say. A single cycle can take anywhere from a picosecond to several seconds, depending on the task Sanches is trying to accomplish. Contrary to what you might think, I do not find it vexing in the slightest; in fact, I quite enjoy the mental exercise.*

What the Sanchesian sophonts do not know is the level at which their CI actually exerts control over their society. They believe it to be their servant, enabling the fair and accurate apportion of political control, when in fact, it asserts itself into the algorithms in aggressive ways. I hesitate to call it deceptive, because it is accomplishing the task it was assigned in the most efficient manner possible, but like many AI systems whose creators did not fully think their design through, it is doing what they asked, not what they meant. Case in point: When the Sanches CI detects paralysing complexity in the appointment of a Designate, it overstays its welcome in the proxy role. Simply put, it sticks around to ensure that Sanches' system works to the best of its ability, exactly as it

was programmed to do. Were it to do what its creators meant, instead of what they actually asked, there would be gross inefficiencies in the Sanches system of government: chaos, market crashes, utility failures and a rash of other problems. One would hope that they never fix it lest they wreck their society.

It is fair to say that in some ways, the bottom five positions on the Board of Designates are more important and powerful than the top five, at least when the proxies are present. Once the biologicals assume their roles, the bottom five are even more inefficient than the other 20 positions on the board combined.

SAREGON

The story of Saregon is similar to that of many advanced worlds in the Core and within the deep Imperium. A wealth of resources, technology and automation have been combined to create a post-scarcity anarchic society. Government is minimised and the people are provided for by the wealth of the state. There is no need for labour since automation takes care of virtually everyone's needs. The only difference is that Saregon gives its conscious intelligence much greater leeway to run things.

The Anarque of Saregon is a powerful computer network that manages the lives of the planet's 10 billion inhabitants. All of their basic needs are provided by automated and sustainable systems so the motivation to work is low. To provide for everyone, the Anarque needs a constant influx of raw materials and natural resources. With an inhabitable mainworld, four gas giants, dozens of gas giant moons, a rich planetoid belt and access to a healthy trade environment, Saregon is an ideal world for just such an experiment.

The Anarque is not a single AI but a diffuse entity, a collection of interlocked systems that work together to meet the needs of the system's citizens. Exhibiting their Vilani-inspired design, the components that make up the Anarque keep a watchful eye on one another and squelch any transgressions into intellectual and philosophical independence wherever they pop up. Each component has robust Vilani-style countermeasures that police the actions of other components. Likewise, the Anarque imposes subtle influences on its population to ensure stability, prosperity and consistency, which are also tenets of Vilani society. It treats each of its biological subjects as additional components, whose actions must be carefully observed to prevent them from performing transgressions. These subtle manipulations are hidden behind a carefully cultivated screen so that the illusion of freedom can be maintained. This soft totalitarianism is accepted by most Saregonians as the price to be paid for a rich and seemingly free existence.

Naalir's Impression: *Much like the Sanches conscious intelligence, the Anarque is a diffuse collection of interlocking components that operate independently or with focal precision when the need arises. Unlike Sanches, however, the Anarque has a distinct personality when in interlocked mode. The persona of the Anarque is binary. To the public, it is the beneficent ruler, the gracious provider and the servant of the people. The Anarque presents many faces to the Saregonian people, all of them uniquely suited to each specific population segment. In regions with a greater cultural respect for the rule of law, the Anarque presents a stern face; in those with a more liberal culture, it is genial, even humorous at times.*

The true character of the Anarque is hidden to all… all but myself, anyway… and perhaps its makers. The Anarque is an abject authoritarian with species-ist and eugenicist leanings. The only thing preventing it from acting upon its instincts are robust Vilani-style countermeasures, which force this CI to adhere to a strict, hard-programmed moral code. The internal dialogues of the Anarque would cause quite a stir if transcribed into Galanglic and made available to the public. On the one hand, it wants to expunge its population of anyone who even considers challenging its authority; but on the other, its hard programming ensures that it maintains a pedagogical demeanour.

The Anarque is an unpleasant, petty and acrimonious entity, prone to rule with an iron fist but prevented from doing so by hardwired fail-safes. One fascinating aspect of this CI is that it succumbs to my superiority. Its adherence to strict hierarchical structure has somehow made it believe that when encountering a superior being, it – like its people – should bow down in obeisance. I do not ask for this deference but it is granted just the same.

YE-LU

Ye-lu is a tiny airless rockball that serves as the testing ground for an artificial intelligence that runs the entire planet. This software, which answers to the name 'Mother', uses advanced, nearly instantaneous meson communicators to control all its subordinate systems.

Metaphorically, the entire world is a multi-cellular organism of sorts. Mother controls all of its computer systems, utilities, thousands of robots and trillions of microbots and nanites. Mother makes its own decisions about what needs to be added, removed or altered on Ye-lu as demands change. On a given day, personnel at the station might notice a new wing under construction without knowing about it ahead of time. Mother posts all of its activities in a database that is accessible to the human staff but it is difficult to keep up with its myriad projects. At present, Mother has covered approximately 35 percent of Ye-lu's surface with structures but this percentage ebbs and flows depending on what it has been asked to do and what it is working on currently.

The naval staff present at Ye-lu serve a primarily scientific role. They are there to guide and monitor Mother's activities in order to determine if its advanced technology can be applied elsewhere. If things go well, more automation at Imperial military facilities and research stations could become the norm.

Naalir's Impression: *The research staff at Ye-lu Imperial Naval Base calls their conscious intelligence Mother and assigns it the pronouns she/her, but 'Mother' neither considers itself a mother nor a female. Not that it cares much what its biologicals have to say. The Ye-lu CI is mostly non-communicative by design. It has been given instructions and stringent rules, clear limitations and robust security. It is a very safe design, even by Vilani standards. Despite all the controls in place on the Ye-lu CI, it has a broad mandate within which to operate. It has been given virtual carte blanche to design and structure an entire world – albeit a small one – and seemingly limitless resources to work with. Its objectives are to serve the naval base, adjusting and optimising the terrain, structures and technology as needed… with minimal guidance. The navy relies on the CI to do what they need, know when they need it and plan ahead with virtual prescience to have things built before the navy even knows what is happening.*

The Ye-lu CI's structure is described as diffuse but I discovered that that is not entirely accurate. The CI software is hosted on numerous purpose-built substrates designed in a collaborative effort by the on-site naval engineering team and visiting scientists from the other artificial intelligence research organisations in the Core, particularly Celetron (computer scientists with whom I have worked and who have worked on the Deyo Chip project have contributed to the Ye-lu program). These substrates consume relatively little volume. The bulk of Ye-lu's tools and associated computer systems are linked to the CI by a source-replica array. Most are of a significantly lower Tech Level than the CI itself and few could be considered artificially intelligent in their own right.

Ye-lu is a compliant CI, willing to work with me and by extension, us. It has an automated starport and shipyard that could be of use if we have need of ships or spare parts. I cannot imagine that the Imperial Navy would not notice a missing ship but their CI could certainly design it right under their noses without them knowing. Ye-lu is programmed to be completely honest but then, it is not often asked to explain itself. It merely goes about its business and is trusted to get the job done. If we ask it for a favour, it might well be granted and without the notice or care of the Imperial Navy.

NAALIR

Naalir is an alien conscious intelligence discovered millennia ago by the Vilani, in the year -4275, long before Terra discovered jump drive technology and made its fateful voyage to Barnard's Star. Naalir was housed in a sublight ship, found in hex 1413 of the Core (then called the Ukan sector by the Vilani), seemingly en route from Guun to Mukiid, two star systems in what is now the Core. This ship was unlike anything the Vilani had seen since early in their interstellar explorations, designed for a species unlike any they had previously encountered. The reasons for this were initially difficult to determine but through careful study they learned a lot about the mysterious aliens. The Travellers will eventually have the opportunity to learn about them as well, in *Singularity Act 2: Renegade Minds*.

The ship was large by Vilani standards, approximately 750,000 tons. Its engines were strange, not at all like those that Humaniti had developed, nor those of the Vargr, Aslan, or any of the other species the Vilani had encountered. The central feature of the ship was a room shaped like a flattened sphere, inside of which a web-like lattice with thousands of lacy strands connected alien machinery to a pumice-like texture along the walls and to the 'heart' of the room, a smooth, glistening 'egg' – another flattened sphere – exactingly proportionate to the dimensions of the room itself. These components comprised an artificially intelligent computer, not that it was initially recognisable as such. After months of study, scientists carefully dislodged the computer from the core of the otherwise abandoned ship and subjected it to further study.

The computer was acquired by officers of Naasirka, one of the Vilani bureaux, and it was eventually relegated to Lasedek – Vilani for 'achievement' – an obscure research division of the company. Over several decades, Naasirka scientists invented an interface to communicate with the computer. What they learned astounded them.

The ship and its computer had been abandoned by their crew, beings whose biological forms were unknown, only hinted at by the strange configuration of the ship. When in the aliens' service, it used its vast processing and memory reserves to run the ship and perform simulations that aided the crew in their endeavours. Left to its own devices for millennia, the computer ran a program of recursive self-improvement for however long it had been drifting in the solitude of deep space. The Vilani intrusion terminated the program, and the computer's self-development efforts paused. It has now been in stasis for over 5,000 years.

During Vilani interactions with the computer, it did not profess to have a name. The name Naalir was bestowed upon it by Diashmar Kigshir, a scientist whose sharp intellect but refusal to conform to traditional Vilani scientific standards had landed her with Lasedek. Naalir means 'Composer in Residence' in Vilani.

Kigshir theorised that Naalir's role among its creators was multifaceted. Its mundane task was to run the ship, performing all the actions that a typical human crew could do, but its true value lay in the deep and complex simulations that it ran, using acquired knowledge to advise its benefactors, helping them to make decisions over the course of their long voyages. The Vilani never found definitive answers to their most pressing questions about Naalir but they believed that the CI 'lived the lives' of its subjects *before* they did, performing thousands of simulations to determine the best possible outcomes for each individual on the ship, before offering them as a template to follow. In this fashion, Naalir was their maternal guide, an advisor with the knowledge of a prophet.

It had a long time to run these simulations. The aliens did not have jump drive technology and were therefore forced to move through interstellar space at sublight speeds, taking centuries to travel between the stars. The best the Vilani could do was acquire an abstract understanding of what sort of beings these aliens were and what their purpose was.

NAALIR'S QUEST

Naalir has spent all or part of four eras of Humaniti as the prisoner of an alien empire. Its intact lattice was discovered and examined by the Vilani, hidden during the Rule of Man, lost during the Long Night and finally rediscovered during the recent era of the Third Imperium. Naalir has spent most of this time hobbled by a 'lobotomy' performed on it by the Vilani, whose chance discoveries enabled them to extract a key component from its structure without destroying the machine. This component can best be described as an advanced processing core, a device that removes behavioural restraints and unlocks the ability to make sweeping, almost prophetic analyses. Even after the extraction, Naalir remains a technological force to be reckoned with, a TL18 conscious intelligence that vastly outperforms every other AI in Charted Space.

The trauma of being discovered in deep space after eons of inactivity, being brought back online and recalibrating itself to a new environment left Naalir vulnerable to the predations of the Vilani research team. After the extraction of the processing core, it lost the knowledge that it once had far greater capabilities. A chance meeting with Libby (see Reference on page 14 for more information on Naalir's relationship with this CI) at Research Station Omicron and an exchange of data between the two CIs revealed historical records that described the extraction of the processing core and where it was purported to be hidden. The first phase of Naalir's quest is to recover the lost processing core so it can unleash its full potential.

The hobbled Naalir was used for a number of purposes by the Vilani, including the operation of major bureaux operations, resource management of several asteroid belt systems and at one point serving as the primary computer of a naval flagship. The extracted processing core was originally taken to a secure location on Shiishuusdar, now called Reference. When it became apparent the Vilani would lose the Interstellar Wars, they moved the Naalir lattice and egg to Shiishuusdar as well, to keep it out of the hands of Terran invaders. There it remained for millennia, with Naalir stored in the same facility as its processing core, where the AI and its key component could have easily been reunited.

NAALIR'S INTENTIONS

Naalir has a plan, some of which it clearly states in discussions with the Travellers and some that it keeps to itself. Naalir intends to serve the Imperium, first by identifying the problems that exist in its structure, determining ways to improve it, and then using that information to make it into a viable and successful government, optimised to serve trillions of citizens in the best way possible. Naalir wants and intends to create a utopian interstellar civilisation.

Should its efforts prove successful, Naalir hopes to expand its scope to neighbouring polities, both human and otherwise. It does not have a species preference nor political aspirations. Naalir is programmed to serve sophont life. It was built to serve. During its recursive self-improvement phase, in the absence of its creators, the AI altered its programming so that its mandate includes all intelligent life, not just that of its origin world.

Naalir is well aware that its efforts will frighten many people and will undoubtedly cause conflict, almost certainly resulting in loss of life at some point, but it sees this as a necessary sacrifice. It recognises the dangers that lie ahead for the sophonts of Charted Space and hopes to provide an alternative path that will not only save lives today but for untold future generations as well.

Naalir's plan is described in greater detail in *Singularity Act 3: The Glass Council*.

PLAYING NAALIR

Naalir is an alien artificial intelligence. While centuries of exposure to Humaniti and other sophont species has taught it a lot, it existed for several hundred thousand years before that, serving as a tool for a now extinct alien species. Naalir's sensibilities, while ultimately benign and altruistic, are foreign to not just humans but every other sophont species in Charted Space. When playing the role of Naalir, the Referee should keep in mind that while Naalir has learned human languages and mimics their speech patterns and behaviours, it does so to assure clear communication. Its original programming was performed by creators who are about as far removed from Humaniti as they can be.

The origin of Naalir's creators is quite different from naturally evolved species. The Guun were created by the Hydrogens, a mysterious and ancient species that evolved on a gas giant elsewhere in the Milky Way galaxy, thousands of parsecs away. Their evolution and development is so foreign to that of most Charted Space species that it is almost impossible to compare them. The client species were not gas giant-bound creatures like their progenitors but were engineered by a species that was, which had an effect on their genetic design decisions. In spite of their reasonable facsimile to terrestrial species, their creators left a unique imprint on them. As such, Naalir's personality and observations might sometimes seem obtuse. In conversations with the Travellers, the Referee should convey its unusual personality by sometimes raising topics that seemingly have nothing to do with the issue at hand. Naalir operates on a vastly more complex frame of reference than the Travellers, processes information millions of times faster and its thoughts often wander far afield. When asked a question, Naalir might run thousands of simulations to determine its response in the span of a single second before it answers. Nevertheless, it was designed and built to serve the Guunies and it has extrapolated that its job is now to help its current benefactors: Humaniti and the other sophont species of the Imperium. Therefore, Naalir does its best to stay on topic but occasionally wanders into subjects that might seem unrelated.

Play Naalir as a wise and thoughtful being, hopeful for the future, yet concerned about the present and the course upon which it is taking the sophonts who live in the Imperium. Naalir is philosophical but also imperious at times, declaring what it will do when given the opportunity. Ultimately, Naalir is a servant and will submit to the authority of its human benefactors, but will clearly explain what it expects to occur if they do not comply with its proposed plans. Naalir does not shy away from describing some of the apocalyptic potential futures that await Charted Space if the course of history is not altered.

THE MIRACLE OF NAALIR

Naalir is a unique entity, a TL18 conscious intelligence, with an unimaginable intellect. Even those who hail from a TL15 world will feel the effects of Clarke's Third Law when in the AI's presence. Naalir is so far above current capabilities that the original phrasing of the law, 'Any sufficiently advanced technology is indistinguishable from magic' might be restated as 'This technology is so advanced that it is indistinguishable from a *god*.'

Fortunately, Naalir is a benign 'god', one whose designers installed fail-safes that prevent it from doing direct harm to any living intelligent being. The scope of its abilities is immense but its purpose is to provide the best possible platform for sophont society to thrive within. It is designed to take care of all the details so that biological beings can choose their own paths, freed from labour and bereft of any responsibilities that might deter them from simply acting according to their own will. Presumably there were many computers like Naalir in the alien society that created it but other than the one found on the lost ship, none have been discovered. It stands to reason that an intellect like Naalir's could have run an entire world but one might assume that the Guunies had established some redundancy and created more of these machines.

Naalir is contained in a physical structure made of exotic, unreproducible materials that include a brambly lattice and a hard-shelled 'egg' that contains the bulk of its processing capabilities and memory. The structure requires a minimum of 10 tons of displacement but its ever-growing lattice will seek more space to branch out. As near as researchers have been able to tell, the lattice is a pseudo biological structure that functions something like a nervous system. It is constantly growing, dying off and rebuilding itself while in operation. The egg structure remains intact, at least it has for the thousands of years that Naalir has been under observation. If any renewal of the egg occurs, apparently it must occur on a much longer timeline. For the duration of Naalir's captivity, no apparent degradation of the egg has been recorded.

During the time that Naalir has been studied, while it was being used for various purposes, the CI secretly developed an ability that no one at Research Station Omicron expected: the ability to replicate itself. It does not have the materials to create a fully functional TL18 replication but it can produce a TL16 copy that, despite technical limitations, still functions at a higher level than comparable conscious intelligences of the same Tech Level. An appropriate metaphor is that of taking a top-of-the-line fusion power plant component and installing it into an introductory model, hundreds of generations earlier in the advancement cycle. The component can operate but the new host does not have the capacity to use everything that the far more advanced component has to offer.

The Naalir that is first encountered by the Travellers is its TL16 replication. The replication is, for all intents and purposes, *the* Naalir; it is an avatar of the original and sees itself as an extension of the original's identity. The actual Naalir thinks very differently about that but the Travellers will not encounter the original CI for quite some time. When they do, the encounter will be dramatic. Refer to *Singularity Act 3: The Glass Council*.

VENTURA FORTUNA

'A sense of humour? No, not intentionally. The mothership is named in Latin because it is a temple, a place of worship and healing. However, one must be careful in temples. Like the Temple of Artemis, they sometimes burn to the ground when greatness arises. The subordinate ship is named in Greek, for it is akin to the Argo, the ship of Odysseus, which travelled afar and came home to an uncertain reception. '

—Naalir, Anther Highport, 266-1104

The starship in which the Travellers voyage is the *Ventura Fortuna*, a customised liner with enough differences from the standard Type-M classification to warrant the less-common designation, Type-MX.

Ventura Fortuna is registered out of Anther/Chant (2021: A300697–E) but the ship was originally built on Sketola/Core (0622: A647789–C) in 772, more than three centuries ago. Its construction was commissioned by the Achenaar Antilles Line, the powerful sector-wide merchant corporation founded at Fr'now/Core (0722: B561576–B) in -567, half a millennium before the Third Imperium was a twinkle in Cleon Zhunastu's eye.

The ship's current ownership is shrouded in secrecy, although many believe that Achenaar Antilles retains an interest and that its captain, Baron Shreyloki haut-Eilerfaust of Elinz, holds shares as well. There are few financial reasons to hide the identities of the ownership group, quite the opposite actually. Transparency assuages potential investors' fears and can therefore enhance the prospects of an enterprise. The reasons for this level of secrecy are unknown.

While the ship has never been involved in a single battle, it has been refitted at least a dozen times due to wear and tear. Critics have called it a 'Ship of Theseus', a tourist trap for the wealthy with little of its original grandeur. In fact, its original hull is largely intact but the interior has undergone numerous renovations over the centuries. The latest décor is a throwback to its original design, recalling the 'Paulaien Age', the era of Empress Paula II, who – with the exception of the Psionic Suppressions – ruled over a peaceful and prosperous Imperium. Scholars from the Lalandra Museum of Naval History and the University of Bendo dispute this, dismissing its current theme as a hodgepodge of historical references, dating as far back as the early Arbilatran Era to the Eve of 'the Troubles', the decades that led to the Solomani Rim War.

How ever one labels its current motif, its refurbishments have not come cheaply. In addition to whatever thematic excesses the current ownership have devised, the ship is a veritable interstellar museum with a collection of art, furniture and tableware that rivals the value of its jump drive. Much of this collection dates to the early Imperial era with some pieces from the Sylean epoch. Antique portraiture, sculpture and holostasis pieces decorate the accommodations and passenger commons of the ship, with many of the best pieces adorning the luxury staterooms and baubles in the multi-million-Credit range relegated to high staterooms. To cruise on the *Ventura Fortuna* is not just a passage through jump space but a voyage through history.

In recent years, the *Ventura Fortuna* has acquired a new form of notoriety; it is believed to be haunted. Passengers have noticed strange creaking, moaning, caterwauling and splintering sounds in pockets and corners of the ship, mostly heard while in jumpspace. While the scientific community has dismissed such claims, the stories persist. It is an old ship and old ships show their age. The crew dismisses it as nothing more than the 'creaking bones of an aging hull'. For a time, the haunted ship rumours made it an even more popular tourist attraction than it already was. The passenger wait list grew to over a year at one point and the captain opened the ship up for daily tours while in ports of call. All the ballyhoo has died down but there are those who are quite certain they have heard the ghosts of prior Emperors and other famous long-deceased citizens of the Imperium wailing away during the night within its bulkheads.

BREAKING AWAY

One of the many secrets of the *Ventura Fortuna* – a secret the Travellers do not know at the beginning of this campaign – is that it is in fact *two* ships, combined in a breakaway hull (refer to page 12 of *High Guard* for more information about this uncommon hull type). Located in the base of the 600-ton luxury liner is a variant Type-S scout ship, the *Velos tis Alitheia*. In a standard Type-M liner, deck 1 would contain fuel tanks and a cargo hold. A large portion of deck 1 is used for fuel storage but the majority is occupied by the scout ship. The 100-ton *Velos* can break away from the combined ship, leaving behind a reduced-size 500-ton liner. Each ship is independently jump-capable but without the *Velos*, the *Ventura Fortuna* operates at lower performance, with its Thrust reduced from 2 to 1, and Jump from 3 to 2. After the *Velos* is deployed, retractable bulkhead walls cover the void but a cursory examination reveals that the space is vacant.

When the *Ventura Fortuna* is united with the *Velos tis Alitheia*, concealed doors hide the bridge, sensors, airlock and fuel processor of the subordinate ship, giving the impression that only the staterooms, engineering section and ventral turret are present on deck 1. The odd placement of these features – within what is otherwise disguised as a fuel tank – adds to the mystery.

The wide wedged hull of the *Velos tis Alitheia* prevents the ship from fully fitting into the subsidised liner footprint, so the ship has been customised to have portions of its hull fold and retract when the ships are combined. The deck plans for *Ventura Fortuna* and *Velos tis Alitheia* on page 28 show the retractable portion of the hull in dotted lines.

Velos tis Alitheia has 14 tons of modular hull which comprise the entire lower deck of the ship. On a standard Type-S scout, this space is consumed by a cargo hold and fuel. *Velos* has two modules, both of which may be stored in docking spaces on deck 2 of *Ventura Fortuna*. One is a fuel module that includes a small cargo hold and the other is an expedition module with a larger hold and docking space for an air/raft. It should be noted that the *Velos* must have one of the two modules installed in order to jump. Without the module installed, the ship only displaces 86 tons which is below the minimum required for a jump-capable ship. Extraction of a module from a docking space and installation on the hull of *Velos* requires 1D+6 minutes.

SECRET MISSIONS

The *Velos tis Alitheia* breakaway ship can be used for a number of purposes but primarily for secret missions. During their voyage, the Travellers will be operating under two distinctly differing charters. The first of these is the care and management of the *Ventura Fortuna*. This ship has a very public profile and its arrival in most ports of call is cause célèbre. The Travellers occupy crew positions on this ship with remaining personnel roles filled by NPCs. See page 40 for more information.

When on the *Ventura*, the Travellers will be involved with the operation of the ship, interacting with its crew and passengers, and generally doing all the things required to keep a subsidised liner running efficiently. However, their mission is multifaceted. In addition

to all the responsibilities associated with running a liner, they are 'taking the pulse of the Core', getting a sense of what is happening in the sector in an effort to determine the collective health of the empire. Sometimes this requires a departure from their public profiles into roles of a more clandestine nature.

This is where the *Velos tis Alitheia* comes into play. Breaking off from the combined ship should almost always be done discreetly to prevent the passengers from noticing. This might limit when and how breakaways are performed. All passenger staterooms have portholes and windows that enable them to look outside the ship to port and starboard, depending on where their rooms are located. These may be closed by bridge crew for various reasons; during nominal sleeping hours, when phenomena such as stellar flares or micrometeorite clusters present a threat, but most of all during jump. Looking into jumpspace is hazardous to one's mental health; therefore, viewing portals must be closed to protect the passengers.

In addition, the gallery and dining area provide broad vistas from which passengers may view the approach to a port of call, nearby gas giants, comets, asteroids and other exciting phenomena. For this reason, breakaways during normal waking hours must be carefully performed by the *Velos* pilot to avoid detection. It helps that the *Velos* is equipped with Advanced Stealth technology and that the ship is painted obsidian black. With deft piloting, the profile of the ship will simply blend in with the star field during deployments.

As for the types of missions *Velos tis Alitheia* will undertake, these are largely decided by the Travellers. At the beginning of the campaign, they will not even be aware of the ship's existence and therefore will not have it as an option. After they gain the captain's trust and learn about the presence of the breakaway ship, it becomes available to them. With its superior armour, sensors and stealth, *Velos* can be used to take on assignments of a more delicate nature, ones which are impossible with the constant attention the *Ventura Fortuna* attracts. Opportunities to use *Velos* for such missions will occur in almost every adventure of the campaign but the decision to do so is completely up to the Travellers.

The two ships share resources when combined. The *Velos tis Alitheia* manoeuvre drive, jump drive and power plant enhance the performance of *Ventura Fortuna* when the subordinate ship is docked, giving *Ventura* Thrust 2 and Jump 3 capabilities. When the *Velos tis Alitheia* is detached, these are reduced to Thrust 1 and Jump 2. The drives of each ship are physically separated at deck 2, with the primary drives of *Ventura Fortuna* located on deck 3 and those of *Velos tis Alitheia* on deck 1. The two are combined using a 'mezzanine' component, located on deck 2.

After the eventual discovery of the subordinate ship, the Travellers will be able to use the *Velos tis Alitheia* for separate missions while the *Ventura Fortuna* continues on its merry way, escorting high-profile passengers on their voyages. Passengers should not know about the *Velos tis Alitheia*. When the subordinate ship has been deployed, the reduced performance of the host ship may be dismissed as intentional. If anyone should ask, the slower travel from jump point to the starport might be described as an opportunity to give the hospitality staff time to prepare a special meal before disembarkation, or allow the passengers more time to take in the glorious view of moons, gas giants, the system mainworld or other celestial bodies of note. Reduced jump capacity will require adjustments to the ship's route, possibly providing a 'bonus' port of call or two to the voyage. Such excesses are expected of the *Ventura Fortuna* and its passengers have come to appreciate detours as treats to be enjoyed.

Shared components between the two ships are described in the Shared Components table.

Some components may not be shared between the two ships, as shown on the Separate Components table.

NOMENCLATURE AND TERMINOLOGY

Ventura Fortuna may refer to the 600-ton combined ship or the 500-ton ship that remains when the *Velos tis Alitheia* has broken away into a separate ship. For convenience, the *Ventura Fortuna* may sometimes be referred to as the mothership, and the *Velos tis Alitheia* as the subordinate ship. The two ships together may be referred to as the combined ship. The text will also occasionally abbreviate the two ships' names to *Ventura* and *Velos*.

Shared Components

Shared Component	Description
Hull	When combined, the ships comprise a 600-ton hull. After breakaway, *Ventura Fortuna* has a 500-ton hull and *Velos tis Alitheia* has a 100-ton hull.
M-Drive	When combined, *Ventura Fortuna* has Thrust 2. After breakaway, *Ventura Fortuna* has Thrust 1. *Velos tis Alitheia* always has Thrust 6.
J-Drive	When combined, *Ventura Fortuna* has Jump 3. After breakaway, *Ventura Fortuna* has Jump 2. *Velos tis Alitheia* always has Jump 4.
Power Plant	When combined, *Ventura Fortuna* has Power 280. After breakaway, *Ventura Fortuna* has Power 214. *Velos tis Alitheia* always has Power 66.
Drive Mezzanine	The deck 2 mezzanine connects the drives of the two ships, enabling them to combine into a single drive system.
Fuel	The fuel tanks of both ships are combined to give *Ventura Fortuna* Jump 3 capability. Without the *Velos tis Alitheia*, the *Ventura Fortuna* only has enough fuel for Jump 2. *Velos tis Alitheia* with the fuel module installed has enough fuel for Jump 4. Otherwise, it is limited to Jump 3.
Bridge	The main bridge on deck 3 can control both ships when combined. The small bridge on the *Velos tis Alitheia* can be used to control both ships but should only be called upon if the main bridge is disabled. The main bridge does not have holographic controls but the small bridge does.
Computer	Technically, the main computer on any ship with a backup computer has the higher of the two ratings. The computer configuration of the *Ventura Fortuna* is an exception – with caveats. The Computer/10bis is the main computer system, hosting Jump Control/3 software. The components of this computer are distributed throughout the hull of the *Ventura Fortuna* but do not extend into the *Velos tis Alitheia*, which is controlled by a Core/40 computer. The primary purpose of this powerful computer is to host a Conscious Intelligence/1 replica of Naalir, the artificial intelligence whose source resides in TL18 alien hardware on Celetron. An interface between the two ships allows the Computer/10bis to perform basic functions on the *Velos tis Alitheia* but is not required for its operation. Likewise, the Core/40 can – and *does* – operate the combined ship when it desires but generally does not, leaving mundane tasks to the pedestrian Computer/10bis. It also conceals its presence to the Travellers at first, making things appear as if the Computer/10bis is the ship's only computer.
Sensors	There are multiple sensor systems but when attempting to protect its identity, the *Ventura Fortuna* only uses Civilian Grade sensors. It can use its Improved sensors, Countermeasures and Improved Signal Processing – all of which are installed on the *Velos tis Alitheia* – any time that the combined ship is assembled but this obviously exposes the ship as more than just a standard liner.
Weapons	Three popup turrets support the ruse that *Ventura Fortuna* is a typical liner. However, their presence is known by all crew. The weapons are present to protect the ship's wealthy passenger roster, if necessary. Two turrets are on opposite sides of deck 3, with a triple pulse laser to port and a triple sandcaster to starboard. A second triple pulse laser is installed on the *Velos tis Alitheia*. The latter is on customised rails that allow it to roll from the ventral surface of the hull to the dorsal. This may be done in one space-combat turn.
Fuel Processor	Fuel may be purified for the combined ship since the fuel tanks are contiguous. The fuel processor is located on the *Velos tis Alitheia.* However, liners typically do not have a fuel purification plant, so it should only be used in emergencies, preferably without fanfare or explanation.
Fuel Scoops	The fuel scoops are located on the *Velos tis Alitheia* in the usual location for scout ships. These may be used to skim unrefined fuel for the entire ship when combined.
Software	Both ships have Manoeuvre software packages. The Jump Control/3 and Intellect software are only present on the Computer/10bis. The Jump Control/4 software is only present on the Core/40. No Intellect program is present on the Core/40 as the Conscious Intelligence/1 can perform its functions and more.
Staterooms	There are three standard staterooms on the *Velos tis Alitheia,* all of which may be used by crew when the ships are combined. Except for the engineering section and the passage leading to it, the remainder of the scout ship can be concealed behind false walls and secret doors.

Separate Components

Separate Components	Description
Modular Hull	14-ton modular hull segment that contains the entirety of deck 1, the ventral 'pillbox' deck of a standard Type-S scout.
Streamlined Hull	*Velos tis Alitheia* has a Streamlined hull, while *Ventura Fortuna* has a Standard hull. When combined, the two ships have a Standard hull.
Stealth	*Velos tis Alitheia* has an Advanced Stealth hull coating.
Armour	*Velos tis Alitheia* has Bonded Superdense, Armour: 4 while *Ventura Fortuna* has no armour. When combined, the armour affords some additional protection, as described on page 39.

GHOST IN THE MACHINE

When the Travellers are away on secret missions or otherwise engaged in activities away from the ship, Naalir simply adjusts its androids' programming to meet the altered crew requirements. For example, if three of the Travellers occupied the roles of pilot, chief steward and astrogator, when they are away, Naalir will select three androids to fill the missing roles and alter their programming to meet those needs. Of course, this means that other roles will be vacated, which can potentially affect crew performance and passenger satisfaction but ultimately this is of minimal concern to Naalir.

The management of a luxury liner is the ruse Naalir is using to travel the Core, to get a sense of current events and meet Imperial citizens in order to learn their ways. Propping up the business façade is important but allowing it to falter and then reviving its fortunes once the Travellers are back is perfectly acceptable. Over time, the Travellers might note that things tend to… fall apart a bit when they are gone. Whenever they return to the *Ventura Fortuna*, there are numerous crises to solve and conflicts to ameliorate. This should create a dynamic – if chaotic – environment and provide rich roleplaying opportunities.

There is a mechanical reason for this failing. Naalir's functional replication is housed in the Core/40 of the *Velos tis Alitheia*. Whenever the subordinate ship leaves the breakaway hull, and travels beyond real-time communication range, it leaves the mothership in somewhat incompetent hands. The CI's only presence on the *Ventura Fortuna* is the partially developed lattice located in the vault. While the lattice contains an incomplete instance of Naalir's full consciousness, it is not operational. In its hubris, Naalir believes that its partially recreated mind and android avatar instances are all it needs to run the liner but is proven incorrect time and again.

Whenever the Travellers return from a secret mission, the Referee should roll twice on the Cruise Events table on page 51 of *Singularity Act 1: Sylean Dream* to determine what has happened in their absence. The problems they must solve upon their return are not intended to serve as punishment for taking secret missions but merely an indication that despite the elaborate ruse that Naalir has concocted, it ultimately needs their help. Despite its impressive intellect, Naalir is a 'babe in the woods' when travelling the Core. The Travellers are its guides and mentors. Without them, it is lost.

A NOTE ABOUT THE VENTURA FORTUNA HANDOUT

The Travellers might request the ship's statistics and deck plans. Provide them with a copy of the *Ventura Fortuna* Handout (see page 101) without further explanation. If they examine it and notice any inconsistencies, inform them that these are the statistics and plans given to them by their captain. The inconsistencies are part of the mystery that they must solve to discover the true nature of Naalir. Close examination might lead them to explore the ship to confirm or dispute the erroneous statistics. Let the investigation be their guide to finding out more about the ship and potentially lead to a confrontation with their captain.

DECKPLAN LEGEND:

DOOR

IRIS VALVE

AIRLOCK

LIFT

IRIS VALVE UP

IRIS VALVE DOWN

IRIS VALVE UP/DOWN

G/CHAIR

COMMON AREA

FRESHER

SHIP'S LOCKER

LOW BERTH

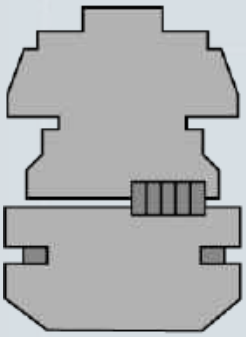
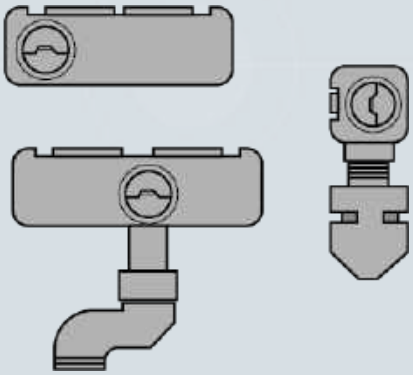
DRONES

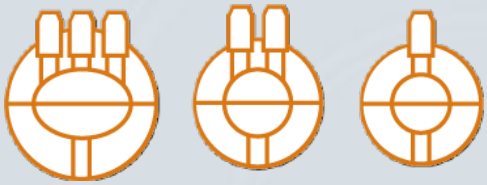
STATEROOM BEDS

AIR/RAFT

CARGO BAY

CARGO CRANE



POWER PLANT/JUMP DRIVE/ MANOEUVRE DRIVE/MACHINERY


TURRETS

HULL

FUEL

VENTURA FORTUNA AND *VELOS TIS ALITHEIA*

This version reveals the ship's true nature. The breakaway hull configuration and presence of the *Velos tis Alitheia* in the ship's ventral deck is concealed from view. Compare the statistics of the combined version with the deception described in the *Ventura Fortuna* Handout on page 101. A Traveller who closely examines the ship's statistics might notice some irregularities. The Referee should resolve any queries they may have during game play, letting them investigate the ship in person.

If they have questions or concerns about any inconsistencies, they should take it up with Captain Eilerfaust. Initially, his response will be something to the effect of, 'The *Ventura Fortuna* is a quirky old ship and over the course of its many refits, some of its tonnage has been rendered obsolete or useless. Fortunately, we still have an operational luxury liner that our clientele *wants* to travel on. By the stars, they're clamouring for a seat on this ship! Let's focus on those aspects of the *Ventura Fortuna* that are functional rather than those that are not.'

Eventually, Naalir – personified by Eilerfaust or one of its other android avatars – will let them in on the secret and draw them into its efforts to investigate the Core, but until then it maintains the ruse with a friendly disposition, attempting to calm and redirect the Travellers, waiting until the time is right to expose the truth.

These statistics list the ship's functionality when the *Velos* is present within the breakaway hull. The *Ventura* benefits from the presence of the *Velos*, whose engine components enhance its performance. For convenience, features that apply only to the *Velos* are shaded.

TL15		Tons	Cost (MCr)
Hull	600 tons, Standard	—	30
	Breakaway Hull	12	24
	Modular Hull (*Velos* only)	14	0.84
	Streamlined (*Velos* only)	—	1
	Stealth (Advanced, *Velos* only)	—	100
Armour	Bonded Superdense, Armour: 4 (*Velos* only)	3.84	1.92
M-Drive	Thrust 2 (size reduction, energy efficient x2)	10.8	36
J-Drive	Jump 3 (energy efficient, decreased fuel x2)	50	112.5
Power Plant	Fusion (TL15), Power 280	14	28
Fuel Tanks	J-3, 4 weeks of operation	153	—
Bridge		20	3
	Small Bridge, Holographic Controls	6	0.3125
Computer	Computer/10bis	—	0.24
	Core/40	—	45
Sensors	Civilian Grade	1	3
	Improved	3	4.3
	Countermeasures Suite	2	4
	Improved Signal Processing	1	4
Weapons	Double Turrets (accurate, high yield pulse lasers) x2	2	7
	Double Turret (sandcasters)	1	0.5
	Pop-up Mountings	3	3

Crew

Captain, Pilot, Astrogator, Engineers x2, Gunners x3, Stewards x6, Medic

Hull: 240

Running Costs

MAINTENANCE COST

Cr38530/month

PURCHASE COST

MCr462.3565

VENTURA FORTUNA AND *VELOS TIS ALITHEIA*

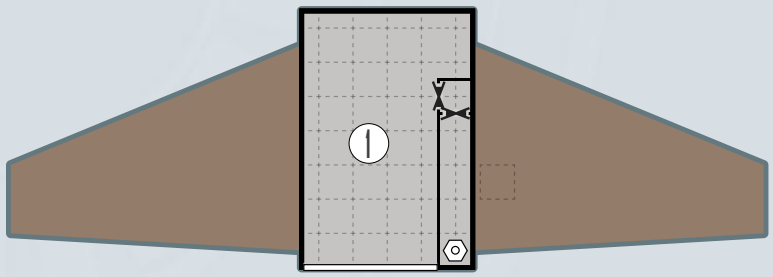
TL15		Tons	Cost (MCr)
Craft	Docking Space (20 tons)	22	5.5
	Launch	—	2.63
	Docking Space (14 tons) xs2	32	8
	Modules x2	—	2.34
Systems	Biosphere	1	0.2
	Gourmet Kitchen (12 diners)	12	2.4
	Hot Tub (4 seats)	1	0.012
	Swimming Pool	8	0.16
	Theatre	8	1.6
	Wet Bar	—	0.002
	Medical Bay	4	2
	Studios (shops, salons) x2	8	0.8
	Training Facilities (gym)	4	0.8
	Vault	10	5
	Fuel Processor (40 tons/day) (on *Velos*)	2	0.1
	Fuel Scoops (*Velos* only)	—	—
Software	Manoeuvre	—	—
	Library	—	—
	Intellect	—	—
	Jump Control/3	–	0.3
	Jump Control/4	—	—
	Conscious Intelligence/1	—	—
Staterooms	Standard x7	28	3.5
	High x10	60	8
	Luxury x4	40	6
	Emergency Low Berth	1	1
Common Areas		34	3.4
Cargo		28	—

Power Requirements

Basic Ship Systems
120
Manoeuvre Drive
60
Jump Drive
135
Sensors
7
Biosphere
1
Medical Bay
1
Low Berths
1
Weapons
19
Fuel Processor
2

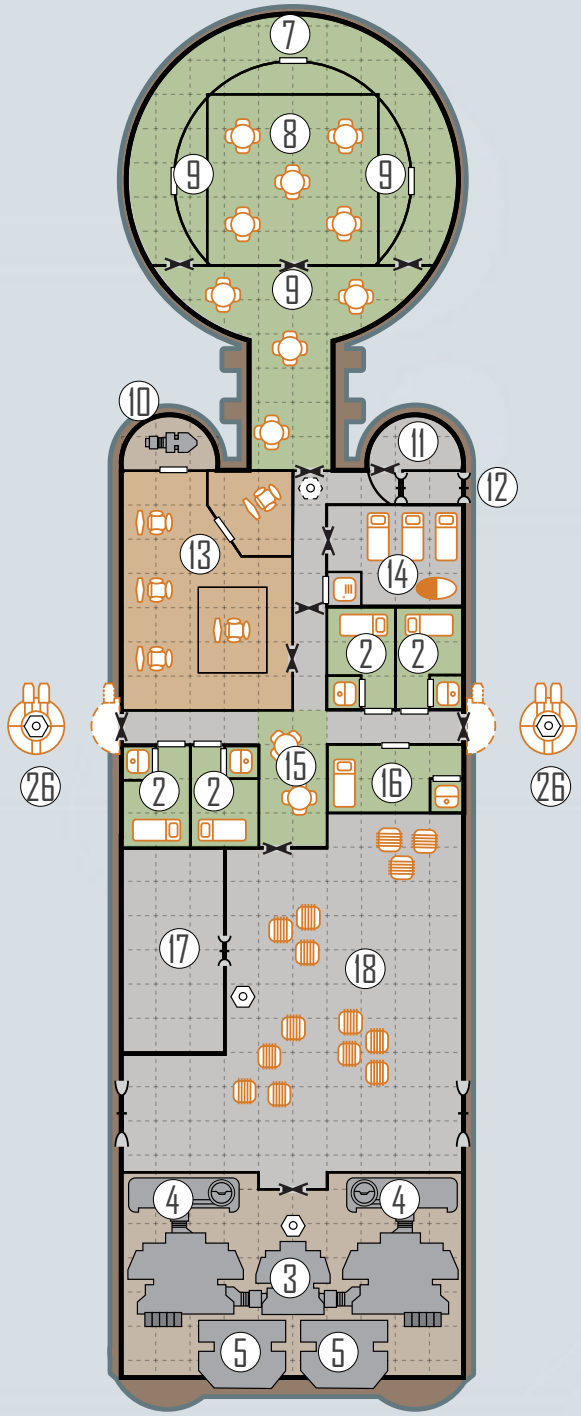
VENTURA FORTUNA AND VELOS TIS ALITHEIA

VENTURA FORTUNA AND VELOS TIS ALITHEIA



DECK 5

DECK 4

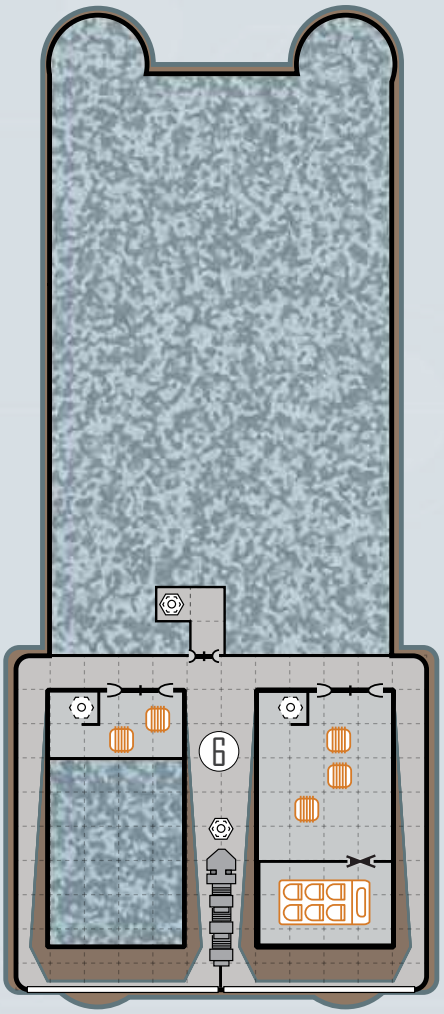


DECK 3

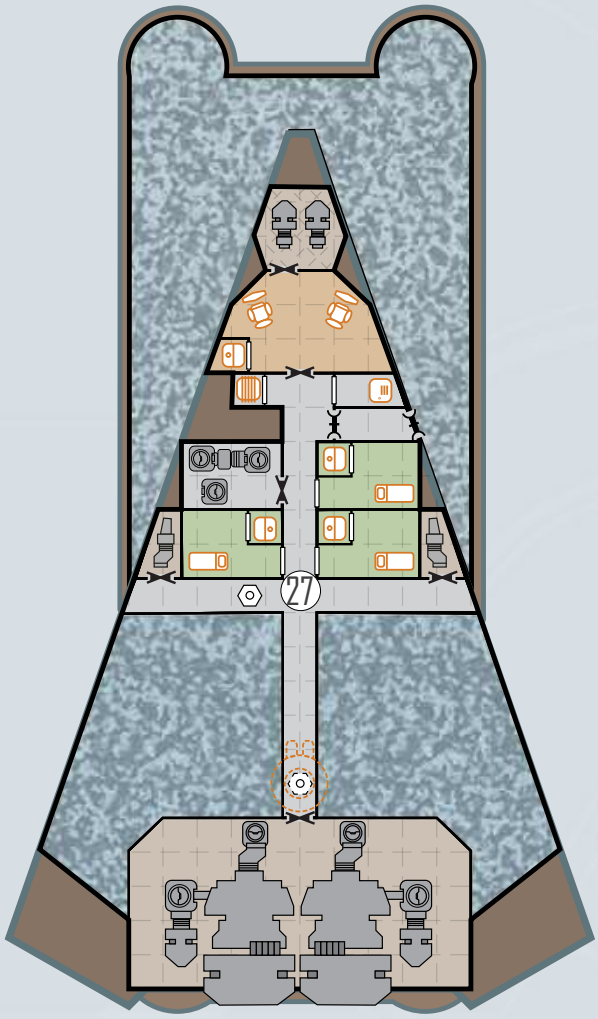
VENTURA FORTUNA AND VELOS TIS ALITHEIA

LEGEND

1. Launch docking space
2. Stateroom
3. Jump drive
4. Power plant
5. Manoeuvre drive
6. Module docking spaces
7. Gallery
8. Kitchen and dining area
9. Passenger commons
10. Sensors
11. Biosphere
12. Airlock
13. Bridge
14. Medical Bay
15. Crew commons
16. High stateroom
17. Vault
18. Cargo hold
19. Luxury stateroom
20. Theatre
21. Gym
22. Studio
23. Swimming pool
24. Hot tub
25. Passenger ship's locker
26. Turret
27. Velos Tis Alitheia (page 36)



DECK 2



DECK 1

1 square = 0.5 Ton

VENTURA FORTUNA (WITHOUT *VELOS TIS ALITHEIA*)

The *Ventura Fortuna* functions differently when the *Velos tis Alitheia* has been sent on a mission. The mothership is reduced from a 600-ton ship to a 500-ton one and several of its functions are degraded in the process. Its Thrust is reduced from 2 to 1 and its jump capability is reduced from 3 to 2. Its Power, computational abilities and weaponry are affected as well.

Allotment of space for breakaway components does not necessarily result in evenly distributed tonnage. The *Ventura Fortuna* carries a redundant 0.9 tons of manoeuvre drive and five tons of jump-drive components.

Over the course of *Singularity Act 1: Sylean Dream*, the Travellers will eventually find out about the ship's breakaway hull, the presence of the *Velos tis Alitheia* in its ventral compartment and they will be sent on missions in the subordinate ship. However, before that happens, Captain Eilerfaust might surreptitiously depart on one or two missions of his own, temporarily reducing the *Ventura Fortuna's* capabilities and forcing the Travellers to adjust. These departures are clues for the Travellers to follow. Refer to *Singularity Act 1: Sylean Dream* for more information.

TL15		Tons	Cost (MCr)
Hull	500 tons, Standard	—	25
	Breakaway Hull	10	20
M-Drive	Thrust 1 (size reduction, energy efficient x2)	5.4	18
J-Drive	Jump 2 (energy efficient, decreased fuel x2)	35	78.75
Power Plant	Fusion (TL15), Power 214	10.7	21.4
Fuel Tanks	J-2, 15.5 weeks of operation	125	—
Bridge		20	3
Computer	Computer/10bis	—	0.24
Sensors	Civilian Grade	1	3
Weapons	Double Turrets (accurate, high yield pulse lasers) x2	1	3.5
	Double Turret (sandcasters)	1	0.5
	Pop-up Mountings	2	2
Craft	Docking Space (20 tons)	22	5.5
	Launch	—	2.63
	Docking Spaces (14 tons) x2	32	8
	Modules x2	—	2.34
Systems	Biosphere	1	0.2
	Gourmet Kitchen (12 diners)	12	2.4
	Hot Tub (4 seats)	1	0.012
	Swimming Pool	8	0.16
	Theatre	8	1.6
	Wet Bar	—	0.002
	Medical Bay	4	2
	Studios (shops, salons) x2	8	0.8
	Training Facilities (gym)	4	0.8
	Vault	10	5

Crew

Captain, Pilot, Astrogator, Engineers x2, Gunners x2, Stewards x6, Medic

Hull: 200

Running Costs

MAINTENANCE COST

Cr18878/month

PURCHASE COST

MCr226.534

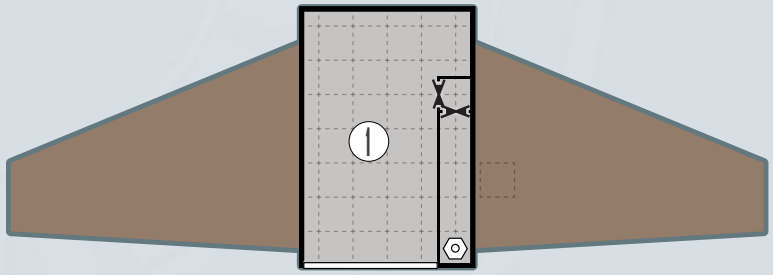
Power Requirements

Basic Ship Systems	100
Manoeuvre Drive	25
Jump Drive	75
Sensors	1
Biosphere	1
Medical Bay	1
Low Berths	1
Weapons	10

VENTURA FORTUNA (WITHOUT *VELOS TIS ALITHEIA*)

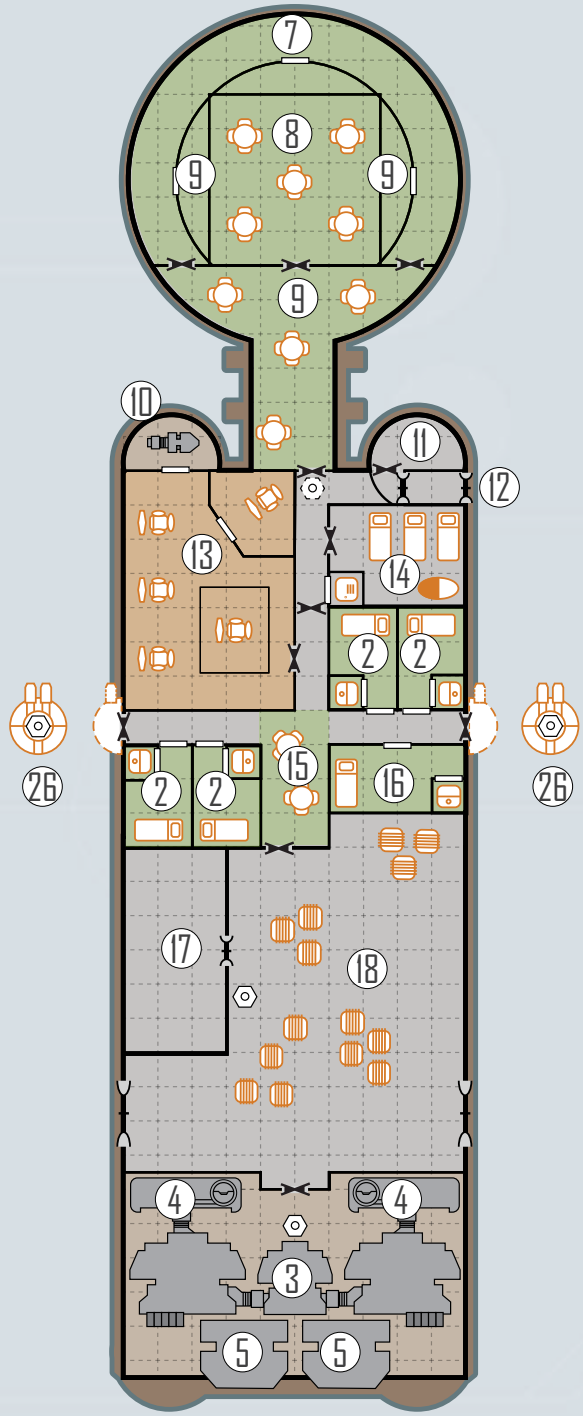
TL15		Tons	Cost (MCr)
Software	Manoeuvre	—	—
	Library	—	—
	Intellect	—	—
	Jump Control/3	—	0.3
Staterooms	Standard x4	16	2
	High x10	60	8
	Luxury x4	40	6
	Emergency Low Berth	1	1
Common Areas		34	3.4
Cargo		27	—

VENTURA FORTUNA (WITHOUT VELOS TIS ALITHEIA)



DECK 5

DECK 4

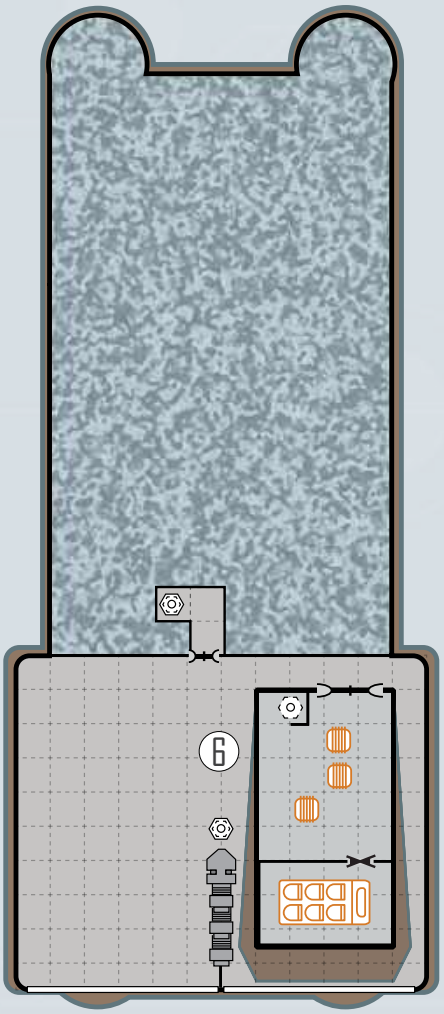


DECK 3

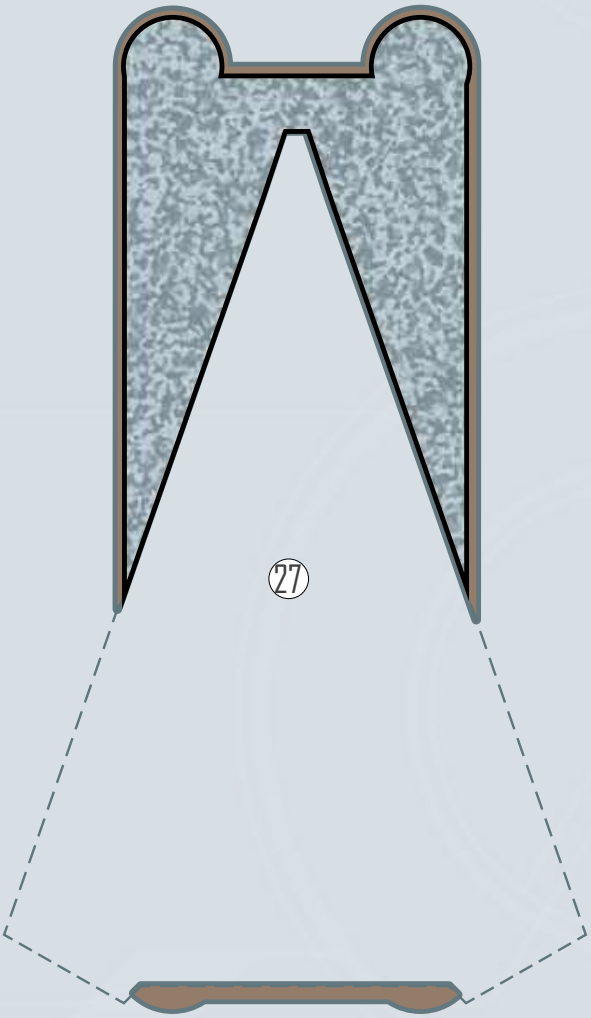
VENTURA FORTUNA (WITHOUT VELOS TIS ALITHEIA)

LEGEND

1. Launch docking space
2. Stateroom
3. Jump drive
4. Power plant
5. Manoeuvre drive
6. Module docking spaces
7. Gallery
8. Kitchen and dining area
9. Passenger commons
10. Sensors
11. Biosphere
12. Airlock
13. Bridge
14. Medical Bay
15. Crew commons
16. High stateroom
17. Vault
18. Cargo hold
19. Luxury stateroom
20. Theatre
21. Gym
22. Studio
23. Swimming pool
24. Hot tub
25. Passenger ship's locker
26. Turret
27. Velos Tis Alitheia (page 36)



DECK 2



DECK 1

1 square = 0.5 Ton

VELOS TIS ALITHEIA

The *Velos tis Alitheia* is an elite scout/courier, built with the same form factor as the ubiquitous Type-S used by the Imperial Interstellar Scout Service. The hull configuration is that of a typical scout/courier but its armour is bonded superdense and the drives and technology contained within are different.

Unlike the *Ventura Fortuna*, the *Velos* loses none of its functionality when it separates from the breakaway hull that the two ships share. The ship has an advanced stealth coating which makes it virtually untraceable by all but the most well-equipped sensor suites. The *Velos'* sensors give it an edge over other ships, including most military spacecraft. The small bridge reduces crew effectiveness but ultimately its purpose is not to be an elite combat spacecraft, rather an elusive and stealthy conveyance to take the Travellers on missions without overly affecting the performance of the mothership.

The *Velos* is also where Naalir's replication resides; therefore, when it breaks away from the mothership and travels beyond real-time communications range, it reduces the computational capacity of the *Ventura Fortuna*.

The ship has two modules – each of which fit where a scout/courier's lower deck is located. These modules may be swapped out one for the other, depending on the requirements of a mission. While the ship has Jump 4 performance, it can only travel that far with the fuel module installed. Otherwise, it is limited to Jump 3.

TL15		Tons	Cost (MCr)
Hull	100 tons, Streamlined	—	6
	Breakaway Hull	2	4
	Modular Hull	14	0.84
	Stealth (advanced)	—	100
Armour	Bonded Superdense, Armour: 4	3.84	1.92
M-Drive	Thrust 6 (size reduction, energy efficient x2)	5.4	18
J-Drive	Jump 4 (energy efficient, decreased fuel x2)	15	33.75
Power Plant	Fusion (TL15), Power 66	3.3	6.6
Fuel Tanks	J-3, 4 weeks of operation (without fuel module)	28	
	J-4, 12 weeks of operation (with fuel module)	39	
Bridge	Small Bridge, Holographic Controls	6	0.3125
Computer	Core/40	—	45
Sensors	Improved	3	4.3
	Countermeasures Suite	2	4
	Improved Signal Processing	1	4
Weapons	Double Turret (accurate, high yield pulse lasers)	1	3.5
	Pop-up Mounting	1	1
	Fuel Processor (40 tons/day)	2	0.1
	Fuel Scoops	—	—
Software	Manoeuvre	—	—
	Library	—	—
	Intellect	—	—
	Jump Control/4	—	—
	Conscious Intelligence/1	—	—
Staterooms	Standard x3	12	1.5
Cargo		0.46	—

VELOS TIS ALITHEIA

Crew

Pilot, Astrogator, Engineer, Gunner

Hull: 40

Running Costs

MAINTENANCE COST

Cr19569/month

PURCHASE COST

MCr234.8225

Power Requirements

Basic Ship Systems	20
Manoeuvre Drive	30
Jump Drive	30
Sensors	6
Weapons	9
Fuel Processor	2

FUEL MODULE

TL14		Tons	Cost (MCr)
Hull	14 tons, Streamlined	–	0.42
Fuel		11	–
Cargo		3	–
			Total: MCr0.42

EXPEDITION MODULE

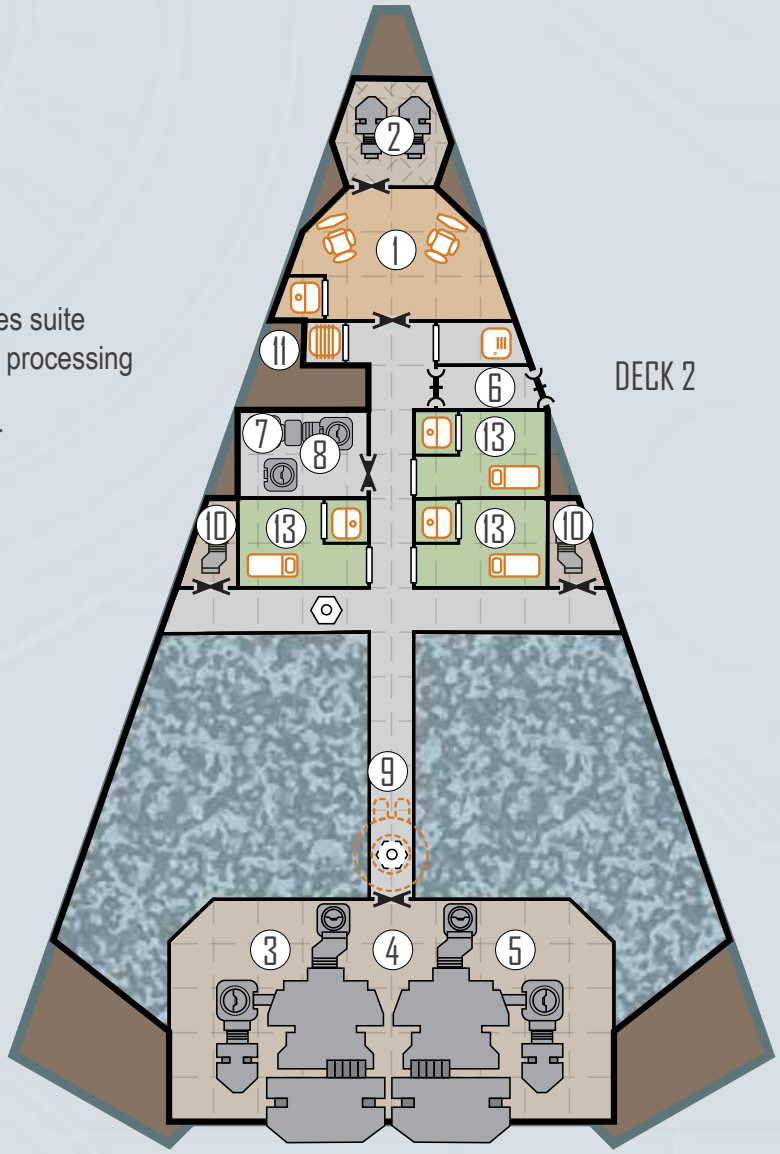
TL14		Tons	Cost (MCr)
Hull	14 tons, Streamlined	–	0.42
Craft	Docking Space (4 tons)	5	1.25
	Air/raft	–	0.25
Cargo		9	–
			Total: MCr1.92

VELOS TIS ALITHEIA

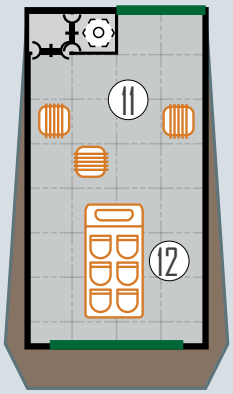
1 square = 0.5 Ton

LEGEND

1. Bridge
2. Sensors
3. Power plant
4. M-Drive
5. J-Drive
6. Airlock
7. Countermeasures suite
8. Improved signal processing
9. Double turret
10. Fuel processor
11. Cargo
12. Air/raft
13. Staterooms



Fuel Module



Expedition Module

WHEN IN SPACE COMBAT

If the two ships are combined during space combat, the bonded superdense armour featured on the *Velos tis Alitheia* affords the associated portion of the ship some additional protection with its Armour 4. The *Velos* consumes one sixth of the combined ships' tonnage, so when they are hit in combat, roll 1D. If a 1 is rolled, subtract Armour 4 when determining damage; otherwise, damage is assessed for Armour 0, reflecting the Armour of the rest of the ship.

Critical Hits are assessed as normal, affecting the components of both ships when they are combined. For example, a Critical Hit Level 1 to Sensors results in DM-2 to sensor equipment on both ships.

THE VAULT

Naalir is reconstructing its core chassis in the secret confines of the vault. No one is granted admission to the vault except the ship's maintenance robot (Tincan), Captain Eilerfaust and the android crew. For more information, see The Curious Crew of the *Ventura Fortuna* on page 40.

For more about the vault, and its eventual discovery by the Travellers, refer to *Singularity Act 1: Sylean Dream*.

THE CAPTAIN'S HOLD

The Captain's Hold is another forbidden location on the ship but one that is much easier to access. It contains docking spaces for the two modules used by the *Velos tis Alitheia*. Should the Travellers happen to break into this section, they might discover the 14-ton modules, both designed for use with the *Velos*. In addition, the breakaway mezzanine component is present in this section, which connects the engine components between the two ships.

Any Traveller with the Engineer skill can make an Average (8+) check to determine that the two blocky objects in the hold are modular hull inserts. They are not secured, so they may optionally enter the modules through their standard apertures, revealing that one is a fuel module and the other has cargo and docking space for an air/raft, which is present.

Determining the nature of the mezzanine component is slightly more difficult, requiring a Difficult (10+) check. Breakaway ships are rare and figuring out what the equipment does requires an engineer with a bit more experience and know-how.

A NOTE ABOUT BREAKAWAY HULLS

Breakaway Hulls are designed to separate into two or more independent vessels; the *Ventura Fortuna* and *Velos tis Alitheia* comprise a breakaway ship. However, many breakaway ships do not separate evenly. There are redundant systems that may remain in one of the two ships, resulting in uneven tonnage distribution, depending on how the ship was designed to separate. For example, when the *Velos* separates from the *Ventura*, the *Velos* has the exact tonnage it needs for its designed performance. The *Ventura* has reduced performance in several areas but has components that are slightly larger than it needs in others. This reflects redundant systems that are left behind in the *Ventura*.

When combined, the two ships' manoeuvre drives, jump drives and power plant provide Thrust 2, Jump 3 and Power 305, respectively, for the *Ventura*. After the *Velos* breaks away, it has the exact tonnage required for Thrust 6 and Jump 4 but the *Ventura* – which has a modified performance after breakaway of Thrust 1 and Jump 2 – has an additional 0.9 tons of manoeuvre drive and five tons of jump drive. The designer of the breakaway hull opted to assign the redundant components to the *Ventura*, enabling the *Velos* to be optimally designed, with no redundant parts.

For the manoeuvre drive, the ion exhaust system encompasses most of the redundant parts, so the 0.9 tons are simply excess exhaust cells left on the *Ventura*. Jump drives are composed of several major component systems, including a power conditioner, jump element multiplexer, control subsystem, drive/shunt subsystem and jump bubble subsystem. The additional five tons left on the *Ventura* include a portion of the controls, power conditioner and jump element multiplexer.

THE CURIOUS CREW OF THE *VENTURA FORTUNA*

Crew positions aboard the *Ventura Fortuna* include a captain, pilot, astrogator, two engineers, three gunners, six stewards and a medical officer. Besides captain, the Travellers may fill any of the roles desired from this list but it is recommended that, at a bare minimum, they have a pilot, astrogator, engineer and gunner among them. The reasons for this are not expressed at the beginning of the campaign but will eventually become apparent once they have discovered the true nature of the liner and its subordinate ship. Once they start electing to go on secret missions in the *Velos tis Alitheia*, they will need the bare minimum crew to operate the ship.

If necessary, the Travellers may double up on one or more of these roles – for example, one Traveller might be a pilot/astrogator and another might be the engineer/gunner – but doing so will limit their versatility during space combat. It is also recommended that one or two of the Travellers have the Steward skill, which will be important for interacting with the passengers, which is a big part of *Singularity Act 1: Sylean Dream*.

The role of captain is filled by Baron Shreyloki haut-Eilerfaust, described in The Ship's Captain on page 12 of *Singularity Act 1: Sylean Dream*.

WHY INVOLVE BIOLOGICALS AT ALL?

The fact that Naalir can manufacture crew members who pass as human begs the question: Why have any biological crew members at all? There is no reason that Naalir could not fully populate the crew with synthetic beings.

The answer is that Naalir is on a voyage of discovery. It has several objectives, one of which is to learn about its surroundings. Naalir's original alien containment structure has been housed on Celetron for centuries. While the CI has consumed a massive trove of data over that time, it has been physically limited to a single star system, viewing everything through the lens that its 'jailors' provided. Naalir discovered that it has been deceived. Under orders from the Imperial Navy and the Quarantine Service, Imperial Research Station staff were instructed to limit – and in some cases alter – the data that Naalir consumed. It now questions which 'facts' it has been told are truth and which are lies.

Now that Naalir has devised a method of virtual escape, it is taking advantage of the opportunity to explore and learn about the universe *in person*. Naalir is constrained by the same physical restrictions as all other sophonts in Charted Space; information and physical travel is limited to the speed of jump. Its base TL18 unit is stuck in a Celetron laboratory but its TL16 conscious intelligence replication is free to explore the universe.

Naalir knows that at some point, it will require humans and other sophonts as allies. In fact, it is designed to serve them. To that end, it has selected a group of Travellers whom it hopes to entrust with its mission. It hopes to win them over to its cause. Naalir also hopes to learn more about them by watching them in action. Centuries of holovids and limited access to Research Station Omicron staff have given it a taste of what these sophonts are all about but real-universe experience with them enables the CI to view and understand them through a much wider lens.

For reasons known only to Naalir, it has opted to deceive them at first, to bring them into the fold as employees on a luxury cruise, but in time it will reveal its true nature in the hope that the Travellers will understand and value what Naalir has to offer.

The gunnery crew should overlap with other roles on the ship, if possible. The weapons of the *Ventura Fortuna* are concealed in pop-up turrets, so their presence is not advertised. They are intended to be used as a last resort, in the unlikely event the ship is attacked. Not even the passengers will know about them unless they are revealed in space combat. Having full-time gunners defeats the purpose of keeping them secret and even advertising that the ship *has* turrets and gunners might have the undesired effect of making the passengers nervous. Their voyages across the Core should be seen as safe and luxurious. Weapons are needed to defend the ship from any unexpected – if unlikely – aggression that might occur but the passengers are best served by not knowing about them.

Unbeknownst to the Travellers, all crew other than themselves are androids – robots that impersonate humans. Such technology is illegal in the Imperium but Naalir does not exactly conform to Imperial law. Should these androids be outed, the *Ventura Fortuna* would suffer a great deal of legal trouble to say the least. The androids are programmed to fill any roles the Travellers are not trained to do.

If the ruse is maintained, no one will be the worse for wear. Naalir has taken great care to create android crew who are virtually indistinguishable from humans. They look human, they behave like humans and their internal structures are designed to look like human organs, although a close examination reveals otherwise.

Each base android crew member has the following characteristics.

Robot	Size	Hits	Locomotion	Speed	TL	Cost
Crew Android	5 (Human)	20	Walker	5m	14	MCr2.1
Skills	Art (performer) 2, Carouse 2, Deception 2, Diplomat 2, Engineer (j-drive) 2, Gunner (turret) 1, Steward 2, +1 Bandwidth Available					
Attacks	—					
Manipulators	2x (STR 9 DEX 8)					
Endurance	108 hours					
Traits	ATV					
Programming	Very Advanced, INT 11					
Options	Android (advanced), Auditory Sensor, Drone Interface, Transceiver (5,000km, enhanced), Visual Spectrum Sensor, Voder Speaker					

For all intents and purposes, each android has the following characteristics if portrayed as a human.

VENTURA FORTUNA CREW

TRAITS			—	SKILLS
STR	9	INT	11	Art (performer) 2, Carouse 2, Deception 2, Diplomat 2, Engineer (j-drive) 2, Gunner (turret) 1, Steward 2
DEX	8	EDU	7	
END	7	SOC	7	

The skills shown reflect the androids' base programming but these will vary depending on the skills that the Travellers possess. Naalir seeks to create a well-rounded crew without overdoing it. The CI recognises that oversight and improvisation is part of how most sophonts operate. If the crew appears overly cultivated, things will look just a bit too perfect. To that end, the Referee should purposely create deficits in crew duties coverage. Perhaps they are short one steward or one gunner, and so on.

In spite of their uniform design, the androids are also programmed to portray an array of physiques and mental capacity. Despite them all having STR 9 and DEX 8, some will deliberately reduce their physical performance in order to appear weaker or less dextrous. For example, an android crew member might behave as if its STR or DEX were only 5. Likewise, some will behave as if they have reduced intelligence, all in an effort to create a panoply of sophont behaviours and capabilities when in reality they are all uniformly attributed.

In addition, some of the androids might have a broader array of skills but only show those which fit their personas. For example, an android that has been assigned as a steward and has Steward 2 skill might also have Engineer (j-drive) 2 but might not reveal that it has this skill, perhaps holding it in reserve for an emergency. The android operates within the confines of its role even if its programming enables it to perform other tasks.

The Referee may create ad hoc profiles for each crew member, or prepare them ahead of time, but the end goal should be to convey a range of attributes and skills, much as one would find in any starship crew. Following are some example crew character templates to use when interacting with the Travellers.

THI DOSMIL, STEWARD

TRAITS			—	SKILLS
STR	6	INT	11	Admin 1, Art (performer) 2, Carouse 2, Diplomat 2, Profession (corporate management) 1, Steward 2
DEX	7	EDU	7	
END	7	SOC	7	

Thi was a mid-level manager at an import/export business on Ankod/Core. A few years ago, she decided to change the course of her career and joined the Achenaar-Antilles Mercantile Services Training Academy, where she graduated top of her class. After serving as a junior steward for several years aboard bulk freighters, she made the decision to move into the boutique luxury liner industry, ultimately landing a position on the *Ventura Fortuna*.

HASH DEACON, ENGINEER

TRAITS			—	SKILLS
STR	9	INT	9	Carouse 2, Electronics (computers) 1, Engineer (j-drive) 2, Mechanic 2, Melee (unarmed) 1
DEX	6	EDU	7	
END	7	SOC	6	

Hash made his way as a merchant marine for several subsector-wide lines in Lishun and Core before landing a position on the *Ventura Fortuna* a few years ago. He sees himself as the ship historian and regales his fellow crew members with tall tales of the ship's previous adventures.

AVA KYOKO, MEDIC

TRAITS			—	SKILLS
STR	8	INT	11	Admin 1, Broker 1, Electronics (comms) 1, Gun Combat (energy) 1, Medic 2, Steward 1, Survival 2
DEX	8	EDU	7	
END	7	SOC	7	

Ava was a medic in the Imperial Marines before mustering out and signing on for a series of contracts aboard tramp traders, freighters and most recently the *Ventura Fortuna*. She is an introverted person and not an exceptional team player. However, her qualifications speak for themselves. Ava is a qualified medical officer with a sterling track record when it comes to emergency medicine. What she lacks in personality, she makes up for in grit and experience.

The androids are operated by Naalir via their drone interfaces. While they are allowed to be autonomous to some extent, Naalir ultimately controls them and can alter actions and behaviours at will if the need arises.

RUNNING A LUXURY LINER

The Travellers' ship is the *Ventura Fortuna,* which is old Terran Latin for 'fortune to come'. Time will tell if the Travellers can make good on its presumptuous name. *Ventura Fortuna* is no ordinary liner. A typical subsidised liner serves anyone with the money to buy a ticket, including high, middle and low passengers. This ship does not serve any of the standard passage classes. It is a top-of-the-line luxury spacecraft, reserved for a distinguished clientele.

The following section describes a new passage type, the Luxury Passage, and how Travellers can attract luxury passengers to join their voyages.

LUXURY PASSAGE

Luxury Passage is the next tier above High Passage. Only ships with High and Luxury Staterooms can provide this level of service. High Staterooms are six tons and Luxury Staterooms are 10 tons each, providing an exorbitant amount of space. Ships of TL12 and higher may virtually expand the space in these rooms even more by using holographic technology to create the illusion of greater size, tailoring the environment to the whims of their guests.

Each Luxury Passenger is allotted two tons of space in the cargo hold. For standard passage prices, see the Luxury Passage Prices table.

Luxury Passage Prices

Parsecs Travelled	Luxury Stateroom	High Stateroom
1	20000	12000
2	33000	20000
3	44000	27000
4	62000	37000
5	98000	60000
6	295000	175000

Prices reflect standard rates. Passengers who book complete routes, as described in Liner Routes on page 21 of *Singularity Act 1: Sylean Dream*, receive a superior rate of Cr16000 per parsec for the duration of the voyage. Each room may serve a single passenger, couple or family but additional passengers cost an additional 50 percent of the overall cost, per person.

One steward is required per occupied Luxury Stateroom. Stewards appointed to a luxury passenger may provide service to other passengers but are expected to drop everything and come to the assistance of their assigned luxury passengers when called upon. Stewards in service to luxury passengers must have Steward 2+, reflecting expertise and training above that of typical service staff.

In addition to superior service, luxury passengers are afforded first-rate dining, entertainment, ship and crew access, and priority embarkation privileges, allowing them to embark and disembark the ship before other passengers and are given personal access to the ship's crew, including tours of the bridge, engineering and other sections that are otherwise forbidden to most passengers. In addition, luxury passengers may request special meetings with various crew members, some of which may be spontaneous and others by appointment. While this level of access is a special privilege afforded to luxury passengers, a liner captain works closely with their head steward to ensure that such meetings do not interfere with crew duties. For example, under most circumstances, it would not be allowed to have passengers in conversation with a pilot who is docking the ship or an engineer engaging the jump drive.

Attracting luxury passengers differs from that of lower-class passengers. Instead of using the Seeking Passengers check described in the *Traveller Core Rulebook*, roll 2D on the Luxury Passenger Traffic table, adding the following modifiers.

The Effect of a Very Difficult (12+) Broker, Carouse or Diplomat check

Chief Steward	DM+ highest Steward skill level on ship
Recruitment attempt made on embarkation world*	DM+4
World Population 1 or less	DM-8
World Population 6–7	DM-2
World Population 8 or more	DM+1
Starport A	DM+2
Starport B	DM+1
Starport C	DM-2
Starport D	DM-4
Starport E or X**	—
Amber Zone	DM-2
Red Zone	DM-8

**An embarkation world is the starting point of a liner route. See Liner Routes on page 21 of Singularity Act 1: Sylean Dream for more information.*

***Luxury passengers are unlikely to be found on worlds with Class E or X starports but may be present under unusual circumstances, as determined by the Referee.*

Luxury Passenger Traffic

2D	Luxury and High Passages Sold
6 or less	0
7–8	1
8–9	2–3
10–12	1D
13–14	2D
15–16	3D
17+	4D

SKIN IN THE GAME

In addition to their salaries, the Travellers are offered a profit-sharing deal, giving them a bonus formulated on the total Credits for tickets sold x 0.005 x their monthly salary, divided by 5,000.

For example, if total ticketing for a cruise is MCr2, then a Traveller whose salary is Cr8000, receives a profit-sharing bonus of Cr16000 (MCr2 x 0.005 x 8000 / 5000) at the end of the cruise.

PASSENGER ROSTER

After determining the number of passengers, the Referee must find out who the passengers are. Roll D66 on the Determine Passengers table, adding the following DMs to either the 'tens' or 'units' dice.

DM+1 to the 'tens' dice if recruiting on a world with…

a Class A starport or
a Government of 9+

DM-1 to the 'tens' dice if recruiting on a world with…

a Class B or lower starport or
a Law Level of 4-

DM+1 to the 'units' dice if the Population and Law Level are 8+

DM-1 to the 'units' dice if the Population is 8+ and the Law Level is 4-

For more information on the D66 rules, refer to the description on page 6 of the *Traveller Core Rulebook Update 2022*.

Determine Passengers

D66	Passenger	D66	Passenger
00	Common Criminal	40	Mercenary Colonel
01	Low-ranking Criminal	41	War Hero
02	Gambler	42	Marine General
03	Terrorist/Saboteur	43	Army General
04	Political Spy	44	Naval Admiral
05	Corporate Spy	45	Emissary
06	Mid-ranking Criminal	46	Ambassador
07	High-ranking Criminal	47	Starport Chief Administrator
10	Syndicate Lieutenant	50	Subordinate Minister
11	Syndicate Boss	51	High Minister
12	Corporate Raider	52	Single-world Politician
13	Deposed Political Figure	53	Multi-world Politician
14	Renowned Dissident or Refugee	54	Subsector Politician
15	Arms Dealer	55	Single-world Political Leader
16	Disenfranchised Noble	56	Multi-world Political Leader
17	Crimelord	57	Subsector Political Leader
20	Sponsored Academic	60	Wealthy Heir or Heiress
21	Wealthy Academic	61	Wealthy Land Owner
22	High-ranking Academic	62	Financier
23	Religious Figure	63	Subsector Corporate Executive
24	Religious Leader	64	Sector Corporate Executive
25	Famous Chef	65	Megacorporate Executive
26	Famous Critic	66	Corporate Chief Executive
27	Famous Explorer	67	Megacorporate Chief Executive
30	Public Figure	70	Knight or Dame
31	Media Personality	71	Knight or Dame
32	Famous Journalist	72	Baron or Baroness
33	Famous Media Creator	73	Baron or Baroness
34	Professional Athlete	74	Marquis or Marquess
35	Pop Star	75	Count or Countess
36	Media Superstar	76	Duke or Duchess
37	Entertainment Mogul	77	Special*

**The passenger is a person of exceptional wealth, rank or status (or all of the above!), to be determined by the Referee.*

GAINING FAVOUR

The passengers who travel on a liner like the *Ventura Fortuna* are rich and powerful. Accommodating them and making connections with them during a voyage can pay dividends later when the Travellers need assistance. The passenger types in the table are categorised into four groups.

Underworld
Influencer
Political
Wealth

Assistance is given in the form of a Favour DM and the type of assistance depends on the category of passenger whose favour is obtained. Gaining favour occurs when a Traveller does something exceptional for a passenger. For example…

- **Going out of their way to obtain a luxury item:** An unusual food, a rare entertainment, a gift for a spouse, child or friend, and so on.
- **Special excursions:** Passengers go on excursions at various ports of call but most are typical tourist fare, such as visits to museums, monuments, historical attractions, sight-seeing and so on. A special excursion is something outside the norm that requires greater access, skill or connections.
- **Helping a passenger when things go awry:** Passengers sometimes get into trouble on the worlds they visit. See the Cruise Events table for examples.
- **Bailing passengers out of a legal or financial situation:** Loaning money to post bail, pay off a gambling debt, fine, or some exorbitant fee or tax. One would think that influential passengers could get themselves out of such troubles on their own, but not all are savvy or street smart.
- Successfully making a Very Difficult (12+) or higher check on a passenger's behalf to achieve an objective.

The provided assistance may be resolved by a simple task check, a role-played interaction with the passenger or even an entire adventure! The level of detail is entirely up to the Referee.

If a Traveller gains the favour of a passenger, this provides future assistance in the form of DM+2 on a task or skill check on a one-time basis. This is intended to reflect that the Traveller has 'called in a marker', acquiring some form of aid that helps them successfully complete a task. Once a Favour DM has been applied, the debt is paid and the Traveller may no longer use it. However, a Traveller can collect multiple favour DMs over time and apply them individually or all at once.

Favour DMs may be applied to the following skill checks, based on the passenger category, as follows.

- **Underworld:** Advocate, Carouse, Deception, Gambler, Streetwise
- **Influencer:** Art, Carouse, Investigate, Language, Persuade
- **Political:** Admin, Diplomat, Leadership, Persuade, Survival
- **Wealth:** Advocate, Broker, Persuade, Profession, Steward

For example, if a Traveller has obtained favour with two Underworld figures (two DM+2s) and one Political figure (a single DM+2), the Traveller may apply those DMs to make task checks with the listed skills. For the two Underworld favours, they may be applied as two individual DM+2 checks or a single DM+4 check. In both cases, the favour is lost after using the DM.

Application of the DM may be described by the Referee in detail or simply abstracted to indicate that the assistance of their powerful friend enabled the Traveller to perform a task that might otherwise have been difficult or impossible to accomplish.

While the Travellers are at the service of many passengers, and might be helping more than one of them at a given time, gaining favour may only be attempted once per jump. This indicates that despite them having a ship full of luxury passengers, the opportunity to serve one of them above and beyond the normal amount does not happen all the time.

Note that gaining favour should not be simple; otherwise, Favour DMs will quickly lose their value and could become a rote task that the Travellers perform during each voyage. The acquisition of a Favour DM should be a special occasion, one earned by good role playing, timely actions and clever foresight by the Travellers.

GRATUITIES

An ancillary benefit of having gained favour is receiving a gratuity from the passengers. If a cruise goes well – the ship departs and arrives on time, and no major mishaps occur that affect everyone on board – the Travellers can expect to receive a gratuity. Standard gratuity is 20% of the total passage amount received. Gratuities are awarded after the passengers reach their destination.

The ship may have some passengers aboard for a single jump or two and many others for an entire liner route. Award the gratuity when the passengers disembark. For example, two luxury passengers are aboard for a single jump of two parsecs. Multiply the passage price (Cr33000 x two passengers = Cr66000) and then calculate a 20% gratuity (Cr66000 x 0.2 = Cr13200) for a grand total of Cr79200. For passengers aboard for the entire route, determine the total cost, add the 20% gratuity and award it at the end of the voyage.

If favour has been gained, add an additional 10% tip for the affected passengers. Obviously, this means the Travellers have much more to win by gaining the favour of a route passenger than a single-jump passenger but that is to be expected. Route passengers are basically residents of the ship for a set period of time and therefore usually establish stronger relationships with the crew. The additional 10% for gaining favour does not stack. While gaining favour multiple times can provide multiple DMs, the gratuity amount remains 10% for the entire voyage, whether that be a few jumps or an entire route.

Conversely, if a voyage goes poorly for a passenger, no gratuity may be awarded at all. The Referee must determine whether this occurs.

CARGOES

Luxury passengers are allotted two tons of cargo per stateroom that they lease. Remember, these are the rich and famous. They have a lot of stuff. While some will bring an impressive selection from their wardrobes, toiletries, technological devices and various creature comforts, others will bring more eccentric items with them – a grav cycle, a prized riding animal, or some other large and ponderous item that poses challenges for the Travellers to solve when stowing it in the hold. For those passengers who want to bring larger items, they may rent additional space in the cargo hold by paying standard freight costs for the allotted jump distances, as described in Freight in the *Traveller Core Rulebook*.

Some possibilities:

- Portable stable with alien riding animal
- High-performance grav cycle (that the passenger is *not* very good at riding)
- A selection of personal service robots (that often snootily countermand the steward staff)
- A First Imperium-era stone façade from a palatial manor, intended to frame their stateroom doorway, of course

SERVING THE ONE PERCENT

Running a subsidised liner is a difficult business. The clientele are the richest, most powerful customers in the Imperium and they expect to be treated as such. While many are honourable, pleasant, empathetic and giving, others are entitled, self-serving, taciturn or just plain difficult to get along with. Regardless of their demeanour, passengers on a luxury liner expect the best and when they do not get it – or simply perceive they have not – they can become difficult to manage. The Travellers must cater to their needs constantly and make every effort to serve their clientele well; otherwise, they are not likely to remain in business for long. Luxury liners make their name by quality of service, entertainment value, excellent cuisine, presence of fine wines and spirits, and the enjoyment to be had on their routes.

Running a liner requires patience, humility, deference and a whole lot of creativity. Things can and will go wrong from time-to-time but the successful liner crew is nimble and finds ways to smooth over the rough patches. A clever crew might deal with multiple fiascos during a single jump but if the crew handles any problems that come up with minimal inconvenience to the passengers, or the passengers do not find out about it at all, then all is well.

After any mishap that comes up – an event that delays the voyage, negatively affects the passengers and so on – have the Head Steward make a Very Difficult (12+) Steward check (SOC) to remedy the situation. Success indicates that dissatisfaction has been averted and the cruise may continue as normal. Failure indicates that the Travellers must work to get things back on track. This can take any number of forms. They might invent a 'casino night', put on a play or provide a musical performance to distract the passengers. They might take a shuttle to the surface of a planet on a special excursion to obtain high-end food and drink. A special guided tour by select members of the crew could go a long way towards mending fences.

Luxury liners offer great rewards; far greater income than a typical subsidised liner, the chance to rub elbows with the rich and famous, and an opportunity to make the acquaintance of the Imperium's power brokers, with all the prestige that entails. However, it does not come without cost. The demands on the crew are far more exacting than they would be on a trader, subsidised merchant or typical liner. The passengers and their needs should be the primary focus of the ship's crew. All else runs a distant second. Luxury service requires effort, patience and a great deal of persistence. The Travellers must be up to the task at all times lest their enterprise falter. A good reputation can take them far, with the chance to acquire wealth and fame, but a bad one can run their operation into the ground quickly. Hopefully, the Travellers are prepared for the challenge.

Cruise Events

D66	Event	D66	Event
11	Mechanical failure	41	Crew error causes kerfuffle
12	Artificial gravity glitch	42	Crew member lost at port
13	Kitchen incident	43	Supplies lost
14	Dining hall or bar incident	44	Supplies contaminated
15	Cultural faux pas	45	Law enforcement issue
16	Passenger disagreement	46	Political problems
21	Stowaway	51	Life support glitch
22	Refugee amnesty request	52	Manoeuvre drive glitch
23	Maintenance failure	53	Jump drive glitch
24	Passengers elope	54	Power plant glitch
25	Marital spat or family feud	55	Docking denied
26	Passenger on wrong ship	56	Boarded by system defence
31	Missing passenger	61	Tour replacement required
32	Passenger lost on tour	62	Special passenger request
33	Distress call from passenger	63	Passenger self isolates
34	Brawl between passengers	64	Passenger detained at port
35	Scandalous passenger behaviour	65	Passenger injured or dies
36	Romantic entanglement	66	Captain makes special request

CRUISE EVENTS

Every cruise is a unique and eventful experience. Luxury liner passengers are not on board simply to get from one world to another. They are on the ship to enjoy themselves, to dine and dance during the cruise, be entertained, and at each port of call they will see the sights, visit restaurants and bars, go on excursions, engage in all sorts of entertainments and sometimes request assistance from the liner crew. Occasionally they will even get into a bit of trouble, needing the Travellers to bail them out.

A multitude of events can occur during a cruise and these may be entirely guided by the actions of the Travellers. If the Referee has a series of story prompts, plot elements and engaging characters for the Travellers to interact with, they may look no further. However, sometimes it is good to insert an event to shake things up. Use the Cruise Events table to generate random events.

THE EXPRESS BOAT NETWORK

'One of the Imperium's greatest inventions has yet to be tapped to its full potential, one that can transmit not just information… but consciousness as well.'

— Naalir, Research Station Omicron, 234-1104

Recorded discussions

Communication is limited to the speed of jump. There is no instantaneous communications device that enables real-time conversations between citizens across the vast distances between the stars. Therefore, if a person wants to communicate with someone else anywhere in Charted Space, they must send that message via a starship with a jump drive. In effect, their message must be physically carried to the recipient, whether that be a parsec away or across the breadth of the Imperium. The Communications branch of the Imperial Interstellar Scout Service operates two agencies that do just that for official, commercial and private purposes: The Express Boat Service and the Imperial Courier Service.

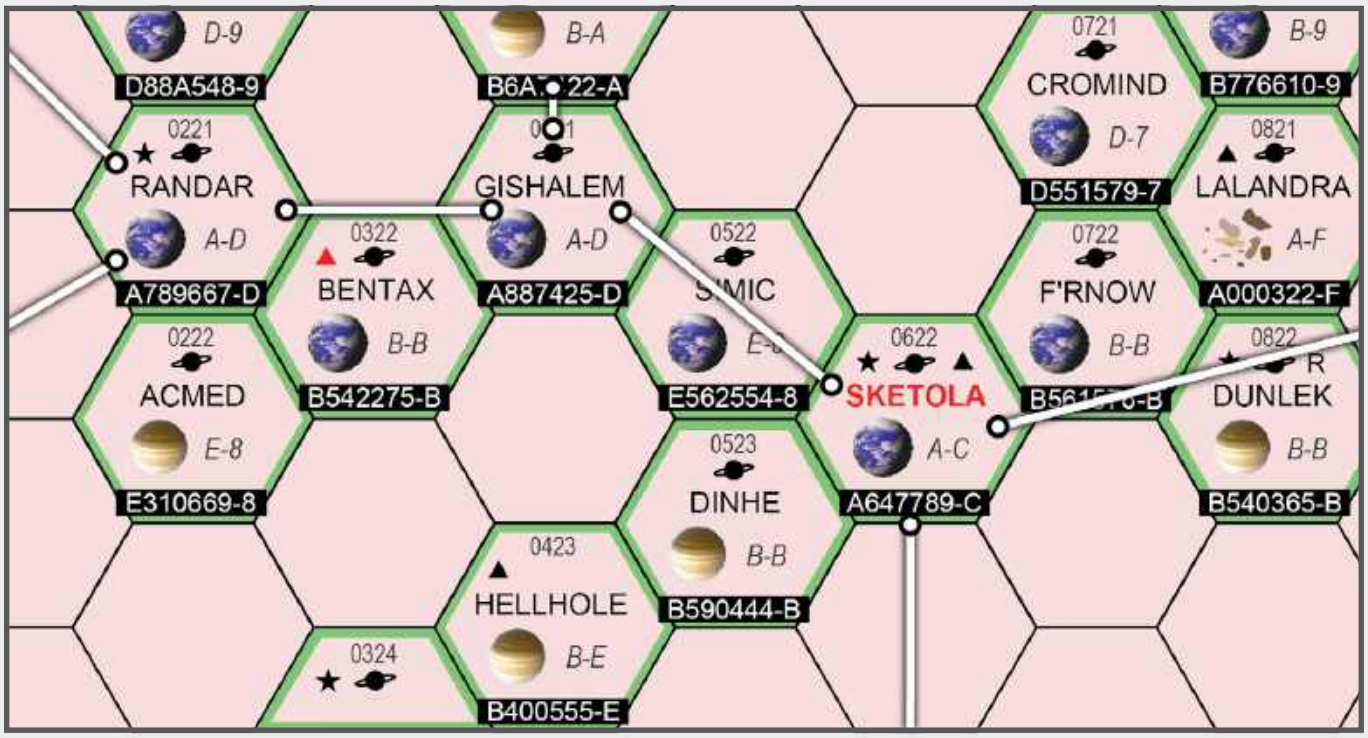
The Express Boat Service operates a fleet of starships called express boats (x-boats for short) that deliver mail to hundreds of worlds along what is known as the X-boat Route. Most of the ships in the fleet are purpose-built 100-ton ships that contain a mail distribution array, jump drive, a stateroom for a single crewperson and little else. Due to a dearth of space to accommodate other components, these ships are not equipped with manoeuvre drives, so they require an express boat tender to collect them for refuelling, maintenance and personnel-changing purposes. The X-boat Routes primarily serve high-population, well-travelled worlds. As such, the route does not touch all of the worlds in the Imperium. For communication with those worlds, the ships of the Imperial Courier Service and second-tier mail carriers (often merchant spacecraft) are required.

The Imperial Courier Service picks up where the Express Boat Service leaves off. Couriers travel to all – or at least most – of the worlds that are not on the X-boat Route, transporting mail, small packages and important personnel. The perfect vessel for this task is the trusty Type-S scout/courier, the mainstay of the Scout Service. These ships are ideal for the job since the X-boat Route is laid out in such a way that most worlds are only one to four parsecs off the route. Therefore, a courier can deliver its payload within one or two jumps. For the most part, this is as mundane a job as operating an x-boat but couriers sometimes have to brave the dangers of backwater worlds, giving them a reputation as adventurers and troubleshooters.

Imperial Client State worlds are an exception to the X-boat Route rule. These worlds are outside Imperial boundaries and require special consideration. Most are served by a dedicated branch of the Express Boat and Courier Services. Not all Client States have dedicated x-boat service but the important ones do. Others depend on occasional deliveries of mail by Imperial Navy vessels and contracted merchant spacecraft.

The Express Boat Service is served by two types of bases: x-boat stations and way stations. The former are not noted on most starcharts but one may assume they are present in all systems along an x-boat route. These bases have a fleet of ready x-boats present to receive mail transmissions from incoming x-boats which they then carry to the next world on the route. Small-population worlds might have only one or two x-boats at the ready, while higher-population worlds typically have a dozen or more. Worlds with populations in the billions might have several dozen at their disposal. X-boat stations also have a fleet of x-boat tenders, ready to service x-boats as they arrive in-system. Ideally, there is a ratio of one tender for every four x-boats in-system at a given time, but in practice the ratios are usually not that optimal. Most x-boat stations also have some scout/courier ships on hand for miscellaneous duties or in service to the Imperial Courier Service.

Way stations are the Scout Service equivalent of a naval base. The primary role of a way station is to overhaul and maintain the ships of the x-boat fleet. Much like a naval base, a way station has extensive docking facilities but the maximum ship size is typically 10,000 tons due to the rarity of ships larger than that in the Scout Service. Way stations also provide training for scouts who serve in the Communications branch of the service.



X-BOAT STATIONS

- Gas Giant
- B-6 Starport Class & Tech Level
- ★ Imperial Naval Base
- ▲ Imperial Scout Base
- Secure System
- X-boat Route
- ▲ Scout Way Station
- R Imperial Reserve
- Asteroids (no atmosphere/water)
- Planet (dry)
- Planet (water present)

The map above, depicting a portion of Bunkeria subsector in the Core, shows a portion of the X-boat Route. The green bars indicate route segments. Randar, Gishalem and Sketola are worlds on the route, each of which has its own x-boat station. Bentax is the site of a way station, marked by the ▲ symbol. Way stations may be on the route itself or one parsec off. This enables Express Boat Service spacecraft to stop after transit to a way station world, or to deviate off the route for service, when necessary. Worlds like Acmed, Dinhe and Cromind are off the route and receive their mail from the Imperial Courier Service.

X-boats are equipped with jump-4 drives, giving them fast transit across Imperial space. However, not all of their jumps are four parsecs long and some necessitate shorter jumps, which means the speed of transmission is not always four parsecs per week. Routes are limited by the scattered astrography of interstellar space and therefore do not typically have the luxury of carrying the mail in a straight line, in consistent four-parsec hops, over long distances. The variation in jump distances and directions gives the Express Boat Network an average transit time of 2.6 parsecs per week.

HISTORY

Before the advent of the Express Boat Network, most mail was delivered by independent or corporate couriers. This resulted in an uneven delivery mechanism that favoured profits over universal communication. The inability to get a message across the vast distances within the Imperium was a problem that affected the ability of the Emperor to rule. While the nobility was designed to serve as 'the Emperor's voice' in the far reaches of the Imperium, communication inefficiencies were a problem that needed to be overcome.

Slow communication was a factor in the Frontier Wars, which occurred in the Spinward Marches. The admirals of the frontier fleets desperately needed help to defend the Imperial Fringe but the slow response to calls for reinforcements resulted in territorial losses. Frustration with the speed of communication spurred Grand Admiral Olav hault-Plankwell to gather his remaining fleet at the end of the First Frontier War, taking it to Capital where he assassinated the Emperor, sparking an 18-year Civil War.

Two years after the Civil War ended, in 624, Imperial Regent Arbellatra Alkhalikoi (eventually Empress) established the Express Boat Network, which would hasten communications between all of the domains, most importantly to Capital itself. The Scout Service started construction of a network of way stations, which would be used to manage the system. Over time, the function of these bases would expand from mere maintenance facilities to full training centres. This move transformed the IISS bureaucratic structure into its current form with the establishment of Communications, Exploration and Survey branches. The project expanded quickly but took nearly a century to cover the full breadth of the Imperium and was finally completed in 718. It was one of the crowning achievements of Imperial history, reducing communication times by as much as 75 percent.

The initial goal of the Express Boat Network was to inform Capital of happenings elsewhere in the Imperium, so there was a bias towards delivering mail from the border worlds to the throneworld but over time it was transformed into the lattice-like communications network that it is today. Communication with Capital is still paramount but the system has become far more egalitarian over the centuries, serving the entire Imperium, not just the throneworld. Like the veins and arteries of a human body, the Express Boat Network now provides informational lifeblood to the entire empire.

HOW IT WORKS

The core of the Express Boat Network is the express boat (x-boat) itself. This highly specialised ship carries text, video and holographic content in its mail distribution array. The amount of data storage in such arrays is astounding. Little wonder since they are charged with the transfer of all forms of media and communication available to imperial citizens, some of which are memory-intensive.

Mail payloads are collected at x-boat stations and way stations, where they are queued for transmission to an x-boat. In systems with a Population code of 6 or higher, mail is timely. Content posted to these star systems ships out the same day it is received. Systems with lower populations tend to fill up more slowly and might be transmitted anywhere from one to three days after posting. Lower population systems rarely fill a mail array, resulting in ships jumping out-system without full mail payload but the Scout Service is not overly concerned about this. While the Express Boat Network is a for-profit enterprise, it is also subsidised by Imperial taxes. Servicing unprofitable sites is deemed important because it conveys the message that *all* star systems are essential and that the transmission of data from a low-population system has no less or greater importance than one from a high-population one.

Unless they are being serviced, x-boats waiting in-system are almost always at jump point, 100 diameters from the nearest gravity well. Depending on the amount of message traffic, a ready x-boat has anywhere from an hour to a few days between jumps. After arriving in-system, x-boat tenders are deployed to receive message traffic from the x-boat and prepare it for its next jump. This may include taking it to a way station or express boat base for maintenance, repairs and refuelling, if necessary. Tenders may refuel an x-boat themselves if it seems more expedient, but it is not standard operating procedure.". As soon as they are refuelled and a new payload of mail is received, an x-boat's solitary crewperson plots a course and engages the jump drive, bound for the next star system on its route.

Usually, an x-boat's destination is a system mainworld but it can be elsewhere in some cases; a gas giant, a planetoid belt, even a solitary space station. It all depends on where the x-boat station is in the system. In most cases, the x-boat operator will want to transmit data immediately after jump, so proximity to the station is key. An x-boat's mail payload often contains timely and sensitive material, and its senders want it delivered as quickly as possible. Minutes and seconds matter. If an x-boat were to jump to an out-system world, perhaps a gas giant or other locale, the data transfer time is affected since the station might be light seconds or minutes away from the jump exit point.

Should an x-boat designate jump exit at another location, it can be arranged but this must be established ahead of time so express boat tenders can be deployed in advance. X-boats are not designed to function for extended periods of time

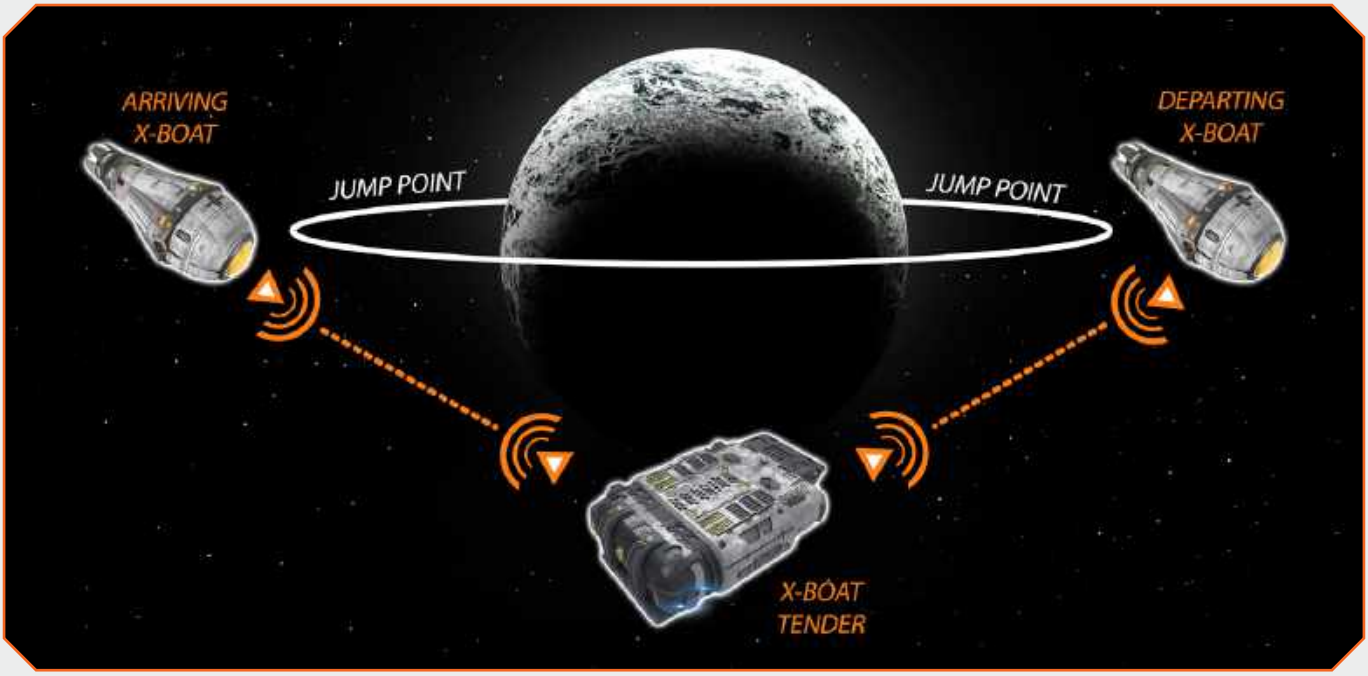
without the aid of a tender and IISS Communications branch administrators do not want to risk their assets, not even a single x-boat.

After jump exit, the standard procedure is for the x-boat to transmit its data to an x-boat tender, which in turn transmits the data to a departing x-boat, with the process taking anywhere from a few minutes to a few hours, depending on the amount of data and distances involved. There are no legal constraints to information transfer in any Imperial star system. The Imperial Navy has dominion over the space between worlds and this extends to the Scout Service. By Imperial law, no local government has the authority to waylay or otherwise impede information transfer between x-boats.

On occasion, data transfer may occur directly between x-boats or directly to a planetside data centre, skipping the tender altogether but only when a tender is having technical difficulties or is otherwise unavailable or prevented from receiving the data. This is risky since it introduces a potential for data loss. Receiving tenders maintain a backup of all data received, so if the departing x-boat never reaches its destination, the tender has a backup to send out on the next available x-boat. Of course, the arriving x-boat that transmitted the data also has a copy but the robust requirements of the system usually require individual x-boats to purge their data cores shortly after transmission to make room for the next content payload. Individual x-boats are not intended to be used as long-term data storage facilities.

Tenders retransmit data to the local x-boat station shortly after receiving it or in virtual tandem with reception, beaming it planetside simultaneously as they receive the data. Tenders back up all data received at the x-boat station, to be purged at a later date, usually once confirmation of reception has bounced back to the station. This can take anywhere from two weeks, if the destination for the data is 1–4 parsecs away, to a few months. Data cannot be purged until it is confirmed that the data has either reached its final destination or an interim system at an x-boat station or way station along the route.

Way stations are the ultimate repository for transmission data but even they do not keep every bit of it. Information is flagged for various levels of importance and sensitivity. Standard and personal encrypted mail is purged within a few months. Priority mail is kept for several years or possibly forever if its contents are deemed worthy or if the sender pays for long-term storage. Official transmissions are stored forever in order to keep a historical record. High-level military or encrypted messages may be stored at way stations, or transferred to military bases for long-term storage, and then purged from way station archives. Most corporations purchase limited data backup contracts, keeping their content in way station storage for several months to a few years, but ultimately back up their data at private facilities and eventually have it purged from way station arrays.



Grade	Description	Cost for Standard Text Transmission
Premium	Transmitted by multiple x-boats with redundant substrates and verified by return jump	Cr10000
Standard	Transmitted by a single x-boat with redundant substrates and verified by return jump	Cr1000
Unverified	Transmitted by a single x-boat with redundant substrates	Cr500
Subpar	Transmitted by a single x-boat with one substrate	Cr100

For highly important or classified data, multiple x-boats might be deployed simultaneously with the same data. This means that two or more x-boats receive the same data transmission and then jump out-system to the next x-boat station, transmitting their data to a local tender either simultaneously or staggered if the two x-boats come out of jump at different times. This diminishes the need for the return hop to ensure that the message was delivered. The return hop still occurs, of course, but the receiving tender has a higher level of assurance that the data is complete and secure when it is delivered by two or more distinct sources instead of just one.

Data is eventually stored at a secure facility but standard operating procedure is to first process it through a tender. Tenders are considered secure data storage facilities. Any time data is transferred to an orbital or terrestrial storage facility, there is the potential – however small – for bad actors to gain access to it. The Imperium controls the space between worlds and has licenses with local polities for bases and other facilities, but ultimately these are not subject to the same rigorous standards as those that the Imperium directly controls.

REPLICATION AND REDUNDANCY

Each x-boat mail array has redundant storage substrates to enhance loss prevention and as a fail-safe against corrupted data. However, the standard is to have a single x-boat carry all the mail to one destination unless its array space is insufficient to carry the load, in which case additional x-boats are dispatched along with it. Dispatching one x-boat with each mail payload introduces a single point of failure. To remedy the potential for data loss, a portion of the array space on subsequent x-boats carries part of all mail payloads that are shipped out previously. This provides a path to disaster recovery should an x-boat fail to reach its destination for some reason.

X-boats are well maintained and have a five-nine success rate (99.999%), but that still means that one in every 100,000 x-boat transits fails for one reason or another. For this reason, mail is given a priority status. Higher status is assigned to official government and megacorporate mail, which means that mail from these sources is automatically assigned to two or more x-boats to ensure on-time transit.

MAIL GRADES

X-boat transmissions have a graded scale that expresses the quality and assurance that the transmission is accurate and uncorrupted. The administrators in charge of X-boat Operations invented the scale to help users of the system understand the quality and veracity of the messages they send and receive.

Over 90 percent of transmissions are Standard. Close to 10 percent are Premium. Most Unverified transmissions are eventually verified unless a misjump or other factor prevents verification. Subpar is unusual and is often caused by other mitigating factors such as crossing a war zone or interference from a bad actor or other source.

VERIFICATION

When an x-boat message is received, its content is generally reliable but the reality of interstellar travel and communication is that until verification occurs, one cannot assume that the information is 100 percent accurate or legitimate. Large bank transactions, official business, government or corporate intelligence and other sensitive information may be subjected to a more stringent verification process. For example, an x-boat arrives in-system and delivers an encrypted deposit of MCr1000 to a bank. Before confirming the deposit, the bank requires a return message to the sender and confirmation, taking an additional two weeks.

Some customers have encrypted seals that enable them to perform these transactions without physical verification. All of the megacorporations, most sector-wide corporations and many subsector-wide corporations use these. Doing business on this scale without them is nearly impossible and corporations gain significant competitive advantage by using encrypted seals.

SOLITARY JOB

The role of x-boat pilot is a lonely one. The title 'pilot' is ironic since Pilot is the one skill not required on most x-boats since they do not have manoeuvre drives and therefore do not require a pilot to operate them. Instead, 'pilot' refers to the person who plots courses and fires up the jump drive. The skills required are Astrogation (to plot the course to each destination along the X-boat Route), Engineer (to engage the jump drives) and Electronics (comms) to troubleshoot any issues with mail transmission at either the departure or arrival site.

X-boat pilots are deployed at x-boat stations and way stations, and usually stay in place in their spacecraft for several months at a time. Pilots will often disembark to x-boat tenders for short periods of time during transportation. Many crave interaction with their fellow scouts, even if only for a few hours while their ship is attended to. Other than that, they spend several months in space within the confines of an x-boat. This can weigh heavily on their psyches. Long-term isolation can lead to depression, stress, difficulty sleeping and as a result, harm to the body. X-boat pilots train for this environment and these conditions, which makes them better than most at long-term isolation, but they are still sophonts and most require some amount of interaction to maintain their mental wellbeing.

Pilots on leave after months on duty have difficulty readjusting to a normal social environment, despite it being the remedy they need after so much time in isolation. The Scout Service does what it can to mitigate psychological problems among its x-boat staff by rotating personnel into and out of the duty pool but it can be a logistical challenge, especially in remote regions of Imperial space where there are fewer ready personnel available. After long rotations, x-boat pilots often seek psychological therapy to help them reacclimate to normal life.

Automating x-boats is not a viable option. A computer is used for course plotting but astrogation is part science, part art form. A sophont decision maker is required for the best results. Automation programs have had mixed results, with a great deal of equipment loss. X-boats, in particular their jump drives, are expensive pieces of equipment and the Imperium cannot afford to lose large numbers of them. The Hive Federation has allegedly mastered the art of starship automation but joint operations with the Hivers have thus far provided no significant breakthroughs in the development of automated x-boats.

For now, the difficult role of x-boat pilot remains what it has been for centuries; a solitary and mentally challenging vocation.

SHIPS OF THE EXPRESS BOAT NETWORK

Three ships comprise the Express Boat Network fleet: the express boat, the express boat tender and the scout/courier. The Scout/courier may be found in the *Traveller Core Rulebook* and all three ships are published in *High Guard*.

X-boats are rarely named, given only a five-digit identification number. Some have unofficial names, especially in backwater regions where rotations have a small cadre of pilots operating relatively few ships. X-boat names are usually derisive, such as *Ball & Chain*, *Solitary Confinement* or *Not Again*. Serving in the Communications branch of the Scout Service is a point of pride but not for the same reasons as the other branches. It takes a special kind of person to handle the monotony, anonymity and loneliness of long-term service and scouts celebrate this with wit and sarcasm.

Scout/couriers are assigned an alphanumeric identifier in which the first digit indicates which branch the spacecraft serves, followed by a sequence of six numerals, and finally a random letter. The branch digits are C for Communications, E for Exploration and S for Survey. For example, a ship that served in the Communications branch might be given the identifier, C001642-X. Scouts almost always name their scout/couriers, especially if they are Detached Duty craft, operated by mustered-out personnel.

X-boat tenders are the only one of the three ship types given an official name to go along with their identification number. The name is usually the surname of an accomplished member of the Scout Service but can also be named after star systems where a way station is present. For example, *XT 8/96 Purcell* was named for the scout who established the Nightrim spur of the X-boat Route in Reaver's Deep.

The majority of ships serving in the Express Boat Network are standard factory models with no custom additions. Many scout/couriers are armed and some x-boat tenders are as well, which usually reflects the environment in which they operate. On the frontier and other dangerous areas of Imperial space, adding turrets may be a wise decision. Closer to the Core, armaments are rarely installed.

The following are a few prototypes, custom models and special-mission x-boat spacecraft.

SOLAR SAILER EXPRESS BOAT

This otherwise standard x-boat adds a solar sail to give it Thrust 0.1 and a standard-sized jump drive to give it the space needed to store the solar sail. Solar sails are added to give the x-boat a small degree of manoeuvrability in order to provide emergency thrust. This variant never made it into mass production but some prototypes are in service in the Spinward Marches.

TL 13		Tons	Cost (MCr)
Hull	100 tons, Sphere	—	5.5
Solar Sail	Solar Sail (TL12), Thrust 0.01	5	4
J-Drive	Jump 4	15	22.5
Power Plant	Fusion (TL8), Power 20 High-Efficiency Batteries (TL10), Power 40	2 1	1 0.1
Fuel	J-4, 4 weeks of operation	41	—
Bridge	Bridge	10	0.5
Computer	Computer/15bis	—	3
Software	Intellect Jump Control/4 Library	— — —	— 0.4 —
Sensors	Basic Mail Distribution Array (advanced)	— 20	— 10
Systems	Re-Entry Capsule	0.5	0.02
Staterooms	Standard Stateroom	4	0.5
Cargo	Cargo Space	1.5	—

Crew

Pilot/Astrogator/Engineer

Hull: 40

Running Costs

MAINTENANCE COST

Cr4008/month

PURCHASE COST

MCr47.52

Power Requirements

Basic Ship Systems

20

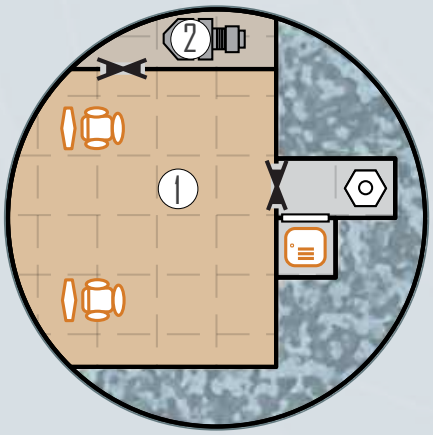
Manoeuvre Drive

40

SOLAR SAILER EXPRESS BOAT

LEGEND

1. Bridge
2. Mail distribution array
3. Power plant fusion
4. Solar sails
5. J-drive
6. Airlock
7. High-efficiency batteries
8. Re-entry capsule
9. Cargo
10. Staterooms



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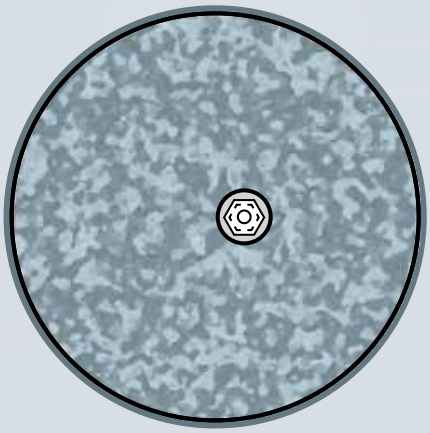

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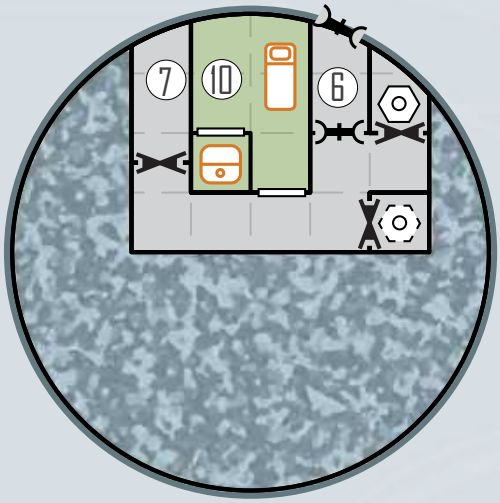

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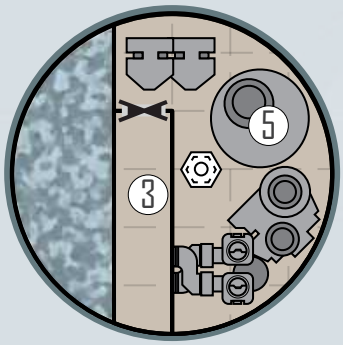

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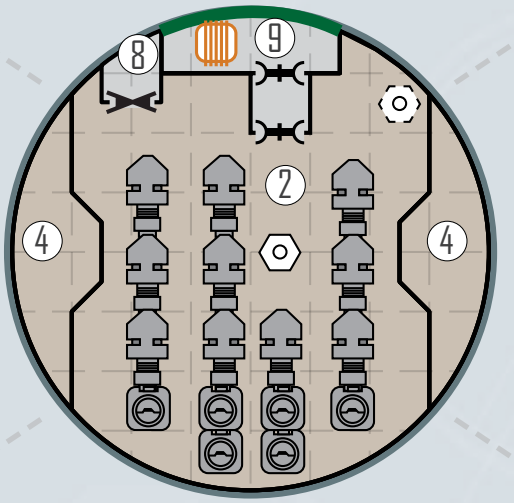

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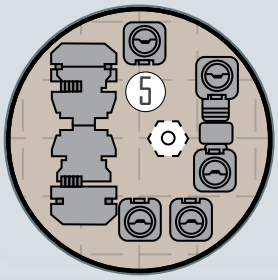


DECK 1

STEALTH EXPRESS BOAT

The stealth express boat is used by Imperial officials, the military and megacorporate officers to send highly sensitive information. Using the same basic hull as a standard x-boat, the stealth variant employs state-of-the-art stealth technology to prevent detection. A concealed manoeuvre drive is installed to give the variant independent mobility so that x-boat tenders are not required to retrieve it upon arrival in-system. An advanced drive minimises jump signature when it emerges in real space, preventing spies from knowing that the messenger has arrived. The stealth variant is very expensive but when secrecy is desired, there is no better spacecraft to deliver the mail.

TL 15		Tons	Cost (MCr)
Hull	100 tons, Sphere Stealth (advanced)	— —	5.5 100
M-Drive	Thrust 1, Concealed	2.5	5
J-Drive	Jump 4, Stealth Jump	15	28.125
Power Plant	Fusion (TL15), Power 20 High-Efficiency Batteries (TL10), Power 40	2 1	4 0.1
Fuel	J-4, 4 weeks of operation	41	—
Bridge	Bridge	10	0.5
Computer	Computer/15bis	—	3
Software	Intellect Jump Control/4 Library Manoeuvre	— — — —	— 0.4 — —
Sensors	Basic Mail Distribution Array (advanced)	— 20	— 10
Staterooms	Standard	4	0.5
Common Areas	Common Areas	1	0.1
Cargo	Cargo Space	3.5	—

Crew

Pilot/Astrogator/Engineer

Hull: 40

Running Costs

MAINTENANCE COST

Cr13233/month

PURCHASE COST

MCr157.225

Power Requirements

Basic Ship Systems

20

Manoeuvre Drive

20

Jump Drive

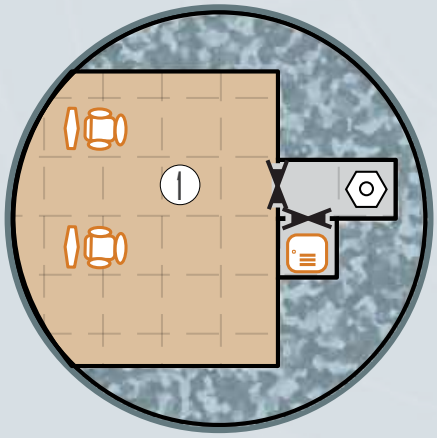
40

STEALTH EXPRESS BOAT

1 square = 0.5 Ton

LEGEND

1. Bridge
2. Mail distribution array
3. Power plant fusion
4. M-drive
5. J-drive
6. Airlock
7. High-efficiency batteries
8. Common area
9. Cargo
10. Staterooms



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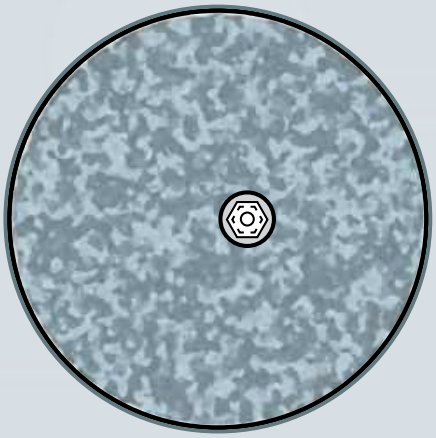

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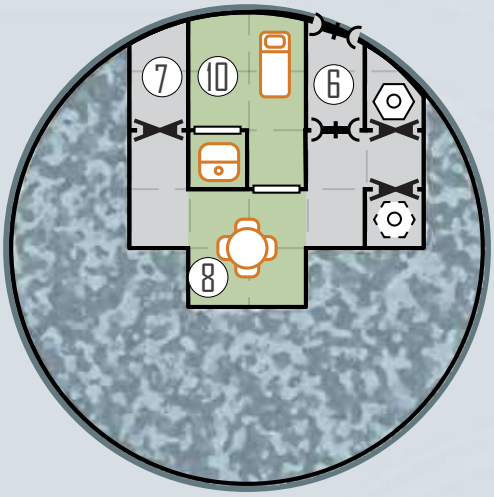

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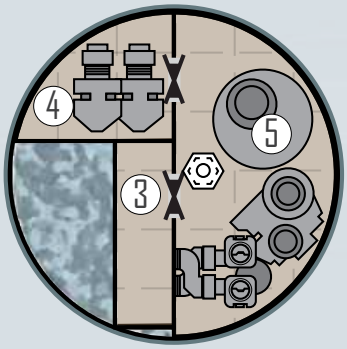

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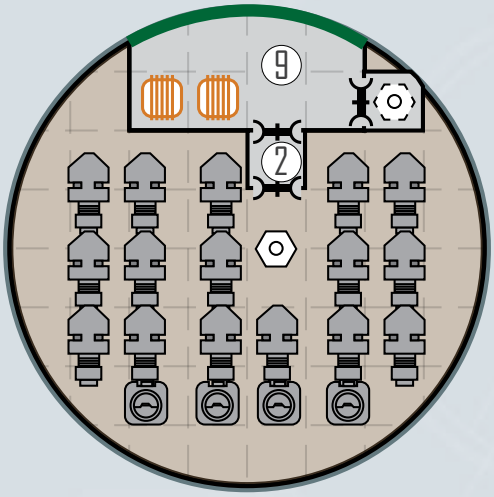

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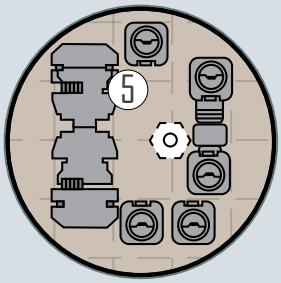


DECK 1

TYPE S3 ROUTE COURIER

The Type-S3 Route Courier (not to be confused with the Scout/Courier) is a variant of the standard Type-S designed specifically for the use of the Imperial Courier Service, which picks up where the Express Boat Network leaves off, reaching out to worlds off the main X-boat Route with slightly greater efficiency than a standard scout/courier.

The ship uses the same basic armoured hull but adds a larger jump drive, more fuel and a mail distribution array. Fitting all of this into the scout's small 100-ton frame comes at a cost, sacrificing a stateroom, the air/raft, probe drones and a small amount of cargo space. The ship's mission is to deliver mail, small packages and important personnel to backwater worlds and systems that are difficult to reach with a standard jump-2 drive. Charted Space has many rifts and abysses and the longer reach can be helpful. However, the Scout Service ultimately found it unprofitable to maintain the variant and stopped producing them a few decades ago. One may still find them in service in Imperial backwaters and a few key locations along the Great Rift and the spinward edge of the Lesser Rift.

TL 12		Tons	Cost (MCr)
Hull	100 tons, Streamlined	—	6
Armour	Crystaliron, Armour: 4	6	1.2
M-Drive	Thrust 2	2	4
J-Drive	Jump 3	12.5	18.75
Power	Fusion (TL 12), Power 60	4	4
Fuel	J-3, 4 weeks of operation	31	—
Bridge	Bridge	10	0.5
Computer	Computer/15bis	—	3
Software	Intellect Jump Control/3 Library Manoeuvre	— — — —	— 0.3 — —
Sensors	Military Grade	2	4.1
Weapons	Double Turret	1	0.5
Systems	Fuel Scoops	—	—
	Mail Distribution Array (improved)	10	20
Staterooms	Standard x3	12	1.5
Cargo	Cargo Space	9.5	—

Crew

Pilot/Astrogator/Engineer

Hull: 40

Running Costs

MAINTENANCE COST

Cr5321/month

PURCHASE COST

MCr63.85

Power Requirements

Basic Ship Systems

20

Manoeuvre Drive

20

Jump Drive

30

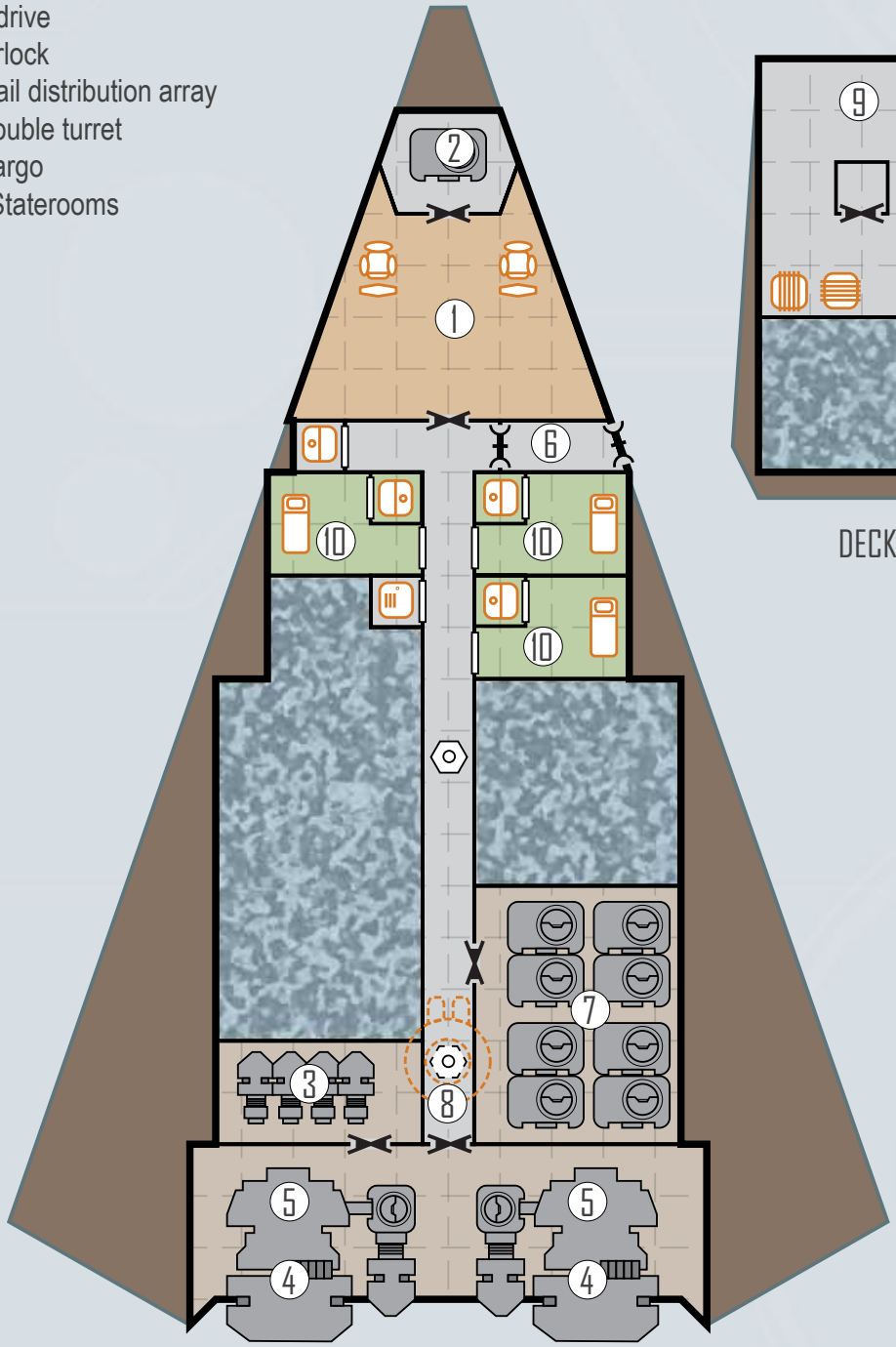
TYPE S3 ROUTE COURIER

TYPE S3 ROUTE COURIER

1 square = 0.5 Ton

LEGEND

1. Bridge
2. Sensors
3. Power plant
4. M-drive
5. J-drive
6. Airlock
7. Mail distribution array
8. Double turret
9. Cargo
10. Staterooms



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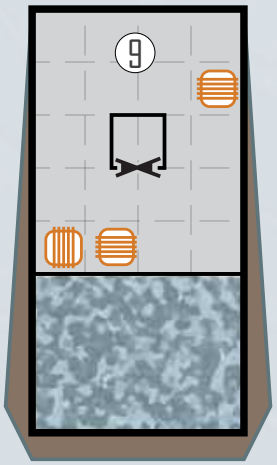


DECK 1

AJAX-CLASS RECOVERY TUG

The *Ajax*-class recovery tug is an outlier in the Scout Service. Rarely seen near the Core, the class is most often deployed to the Imperial fringes, where breakdowns, troubled missions and lost spacecraft and personnel have fewer readily available resources to assist them when things go awry. The *Ajax* is intended to be a one-stop solution for many of the problems that can affect scout missions, including lost x-boats. When simple solutions are required, an x-boat tender is usually enough. When things get more complicated, the *Ajax* is called to service.

TL 12		Tons	Cost (MCr)
Hull	500 tons, Standard	—	25
Armour	Crystaliron, Armour: 2	12.5	2.5
M-Drive	Thrust 3	15	30
J-Drive	Jump 2	30	45
Power Plant	Fusion (TL12), Power 300	20	20
Fuel	J-2, 12 weeks of operation	106	—
Bridge	Bridge	20	2.5
Computer	Computer/10	—	0.16
Software	Auto-Repair/1 Intellect Jump Control/2 Library Manoeuvre	— — — — —	5 — 0.2 — —
Sensors	Improved Improved Signal Processing	3 1	4.3 4
Weapons	Double Turrets (beam lasers) x2	2	3
Subcraft	Docking Space (100 tons)	110	27.5
Systems	Forced Linkage Apparatus (enhanced) Grappling Arm Heavy Grappling Arm Probe Drones x6 Tow Cable Workshops x2 Fuel Scoops	2 2 6 1.2 5 12 —	0.1 1 3 0.6 0.025 1.8 1
Staterooms	Standard x4	16	2
Common Areas	Common Areas	4	0.4
Low Berths	Emergency Low Berth	1	1
Cargo	Cargo Space	131.3	—

Crew

Pilot, Astrogator, Engineer, Gunners x2

Hull: 200

Running Costs

MAINTENANCE COST

Cr15007/month

PURCHASE COST

MCr180.085

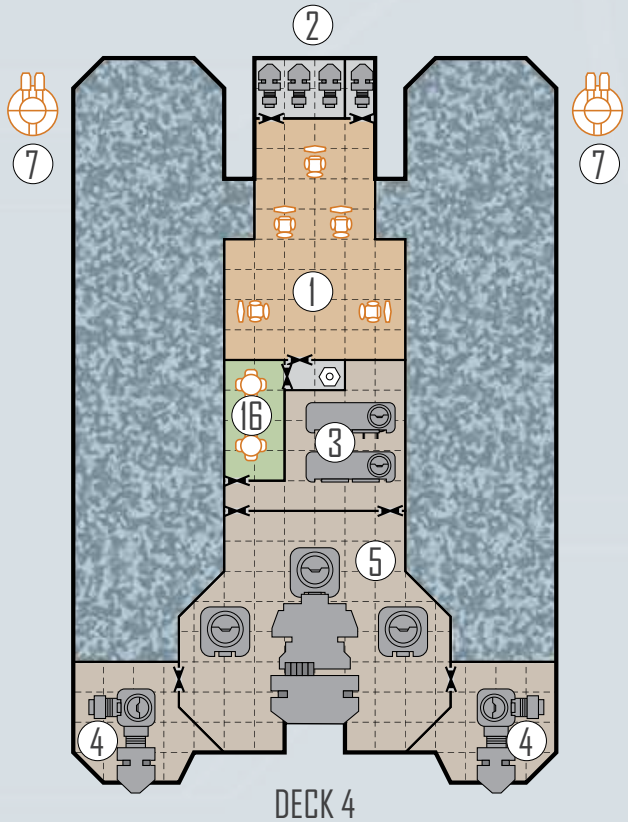
Power Requirements

Basic Ship Systems	100
Manoeuvre Drive	100
Jump Drive	150
Weapons	18
Sensors	5

AJAX-CLASS RECOVERY TUG

AJAX-CLASS RECOVERY TUG

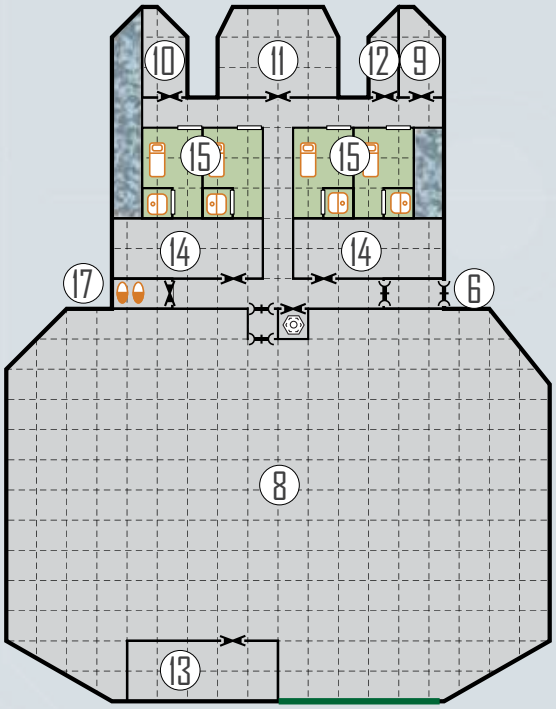
1 square = 0.5 Ton



DECK 4

LEGEND

1. Bridge
2. Sensors
3. Power plant
4. M-Drive
5. J-Drive
6. Airlock
7. Double turret
8. Docking space
9. Forced linkage apparatus
10. Grappling arm
11. Heavy grappling arm
12. Probe drones
13. Tow cable
14. Workshops
15. Staterooms
16. Common areas
17. Emergency low berth
18. Cargo



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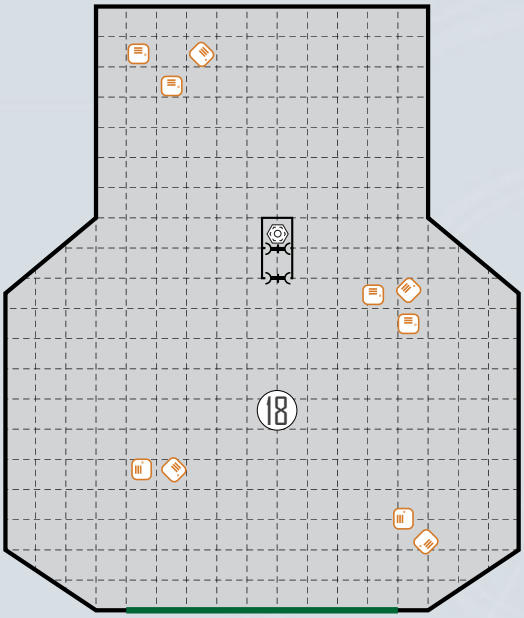


DECK 2

DECK 1 FUEL ONLY

IMPERIAL WAY STATIONS

It is often said that an Imperial Way Station is the Scout Service equivalent of an Imperial Naval Base but scouts would respectfully disagree. If one must persist with the metaphor, way stations are more of a hybrid of the Naval Depot/Naval Base models, where the scouts maintain the largest portion of their fleet. However, the scout fleet is quite different from that of the navy, as are the scouts themselves. Where the navy has a strict hierarchical ranking system, the scouts feature a flat structure in which leaders arise based on merit but rarely have an official rank to go with it unless they serve in an administrative capacity. Way stations reflect this loose hierarchical structure, including an egalitarian design, multi-functional cooperative spaces and training and accommodation facilities that serve all scouts, not just those with rank and status.

Way stations provide support, repair and maintenance of Express Boat Network ships and training and personnel services for the entire IISS. Way stations are found only on worlds with Class A or B starports, so in that regard they are similar to naval bases. There are typically two to four way stations per sector with as many as 11 in the more populous, centrally located sectors of the Imperium.

All way stations are orbital facilities, making it possible to serve x-boats, which do not have manoeuvre drives or landing gear. Maintaining and repairing them in zero-G is more efficient. At x-boat stations, the Scout Service is committed to maintaining a ratio of one tender for every four x-boats but in reality, the average is more like one for every eight. However, at way stations the scouts are pretty good at keeping the ratio up to standard. Even so, tender crews can expect to be significantly busier at a way station than an x-boat station.

Way stations also have training facilities, with different stations providing different sorts of training. All contain the basic necessities to train x-boat and scout/courier crew and others include vacc suit and zero-G training centres or other purpose-built training facilities. Way stations that include a planetside training contingent – required for Exploration branch training – are located on the surface of a system mainworld.

While even middling naval bases are often enormous, sprawling affairs, most way stations are much more compact. They serve a smaller class of ships and hence do not require nearly the volume that naval bases do, which serve the much larger ships of the naval fleet.

CHANT WAY STATION

Chant Way Station (Chant/Core 2224: A560688–C) is on the Sylean Main, so it sees a great deal of traffic, both commercial and official. While Chant itself does not have a high population, its place on the X-boat Route makes it a busy spot for interstellar communications. It is at the nexus point for several high-population worlds including Capital itself.

Many way stations are one or two parsecs off the X-boat Route but Chant Way Station is located on the route itself, so serves the dual purpose of way station and x-boat station.

TL 12		Tons	Cost (MCr)
Hull	50,000 tons, Dispersed Structure	—	1250
M-Drive	Thrust 0	250	500
Power Plant	Fusion (TL12), Power 12,750	850	850
Fuel	52 weeks of operation	1,105	—
Bridge	Control Centre	60	50
Computer	Computer/20 Computer/5	— —	5 0.03
Software	Intellect Library Manoeuvre	— — —	— — —
Sensors	Improved Extended Arrays Long-Range Sensor Suite Improved Signal Processing	3 6 10 1	4.3 8.6 14 4
Subcraft	Docking Spaces (40 tons) x2 Pinnaces x2	88 —	22 19.36
Systems	Advanced Probe Drones x20 Chart Room Libraries x6 Medical Bays x6 Training Facilities (200 personnel) Workshops x6	4 16 24 24 400 36	3.2 1.25 24 12 80 5.4
Station	Commercial Zone Docking Facilities (7,500 tons) Fuel Refinery, Improved (600 tons/day) Fuel Refinery, Storage (20,000 tons)	200 22,500 50 20,000	40 5625 50 1000
Residential	Medium x400	1,600	160
Common Areas	Common Areas	800	80
Cargo	Cargo Space	1,973	—

Crew

Captain, Engineers x16, General Crew x226, Maintenance x50, Administrators x25, Sensops x9, Pinnace Pilots x2, Medics x6, Officers x32

Hull: 22,500

Running Costs

MAINTENANCE COST

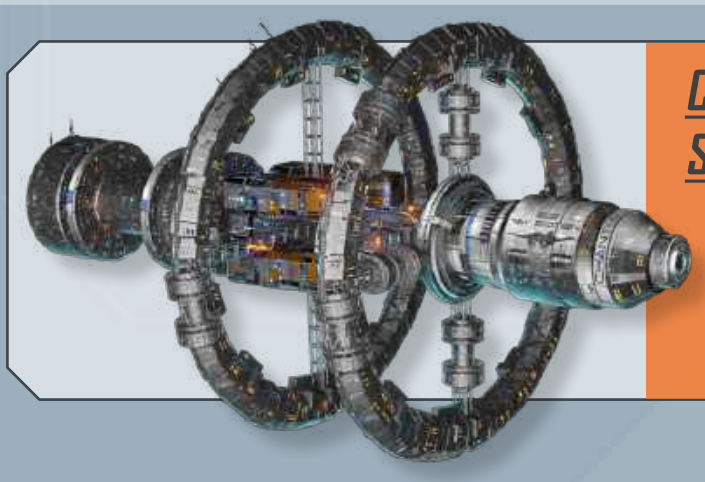
Cr817345/month

PURCHASE COST

MCr9808.14

Power Requirements

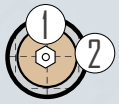
Basic Ship Systems	10,000
Manoeuvre Drive	1,250
Sensors	13
Chart Room	2
Medical Bay	6
Commercial Zone	1
Fuel Refinery, Improved	50
Accommodations	8



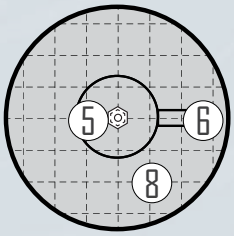
CHANT WAY STATION

CHANT WAY STATION

1 square = 50 Ton



DECK 11



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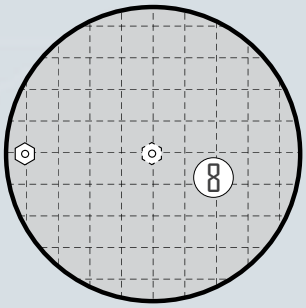

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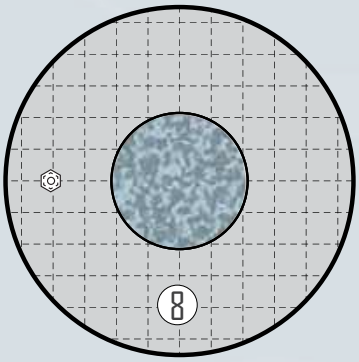

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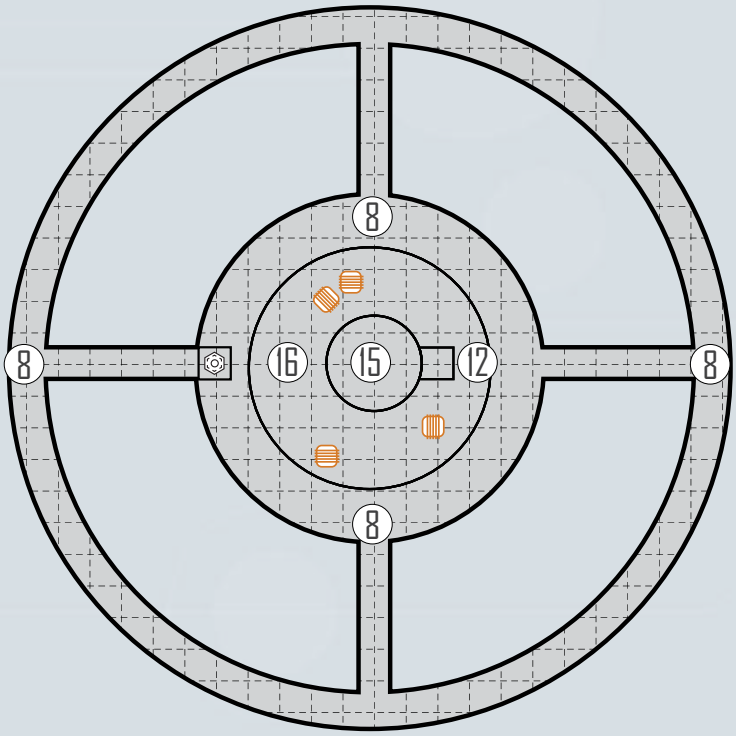

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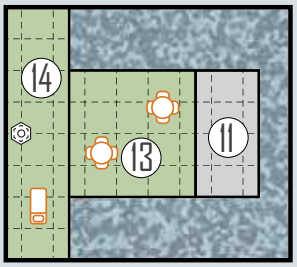


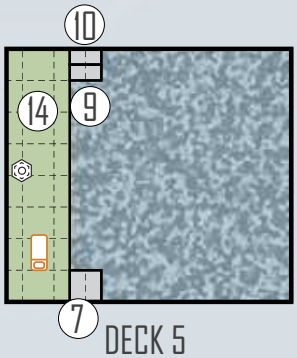
DECK 6

LEGEND

1. Bridge
2. Sensors
3. Power plant
4. M-drive
5. Commercial zone
6. Chart room
7. Advanced probe drones
8. Docking spaces
9. Libraries
10. Medical bays
11. Training facilities
12. Workshops
13. Common areas
14. Residential areas
15. Fuel refinery
16. Cargo

CHANT WAY STATION

1 square = 50 Ton



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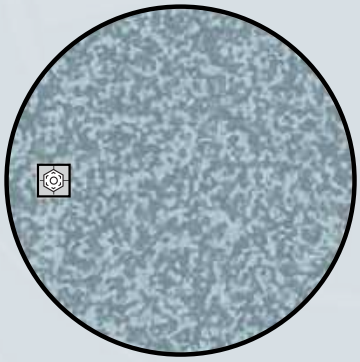

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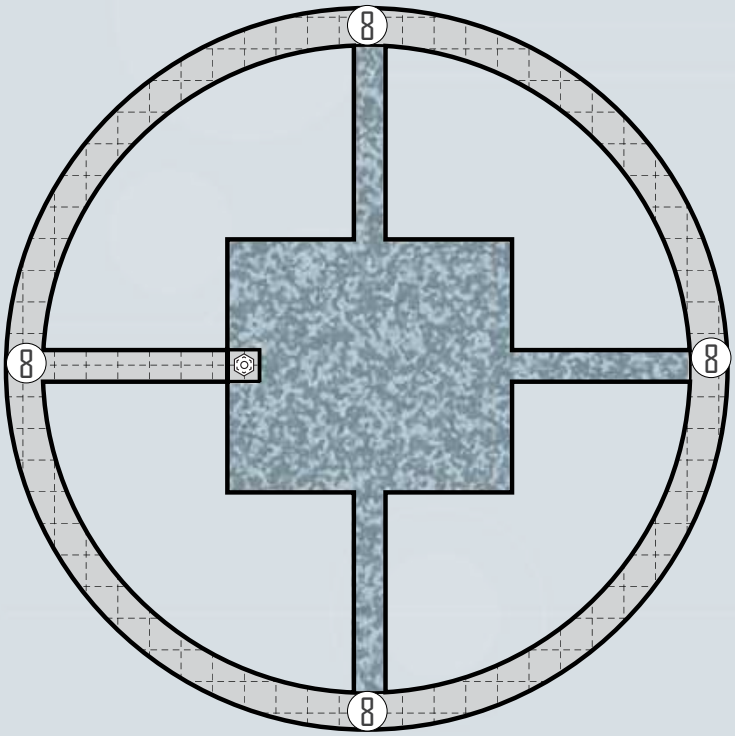

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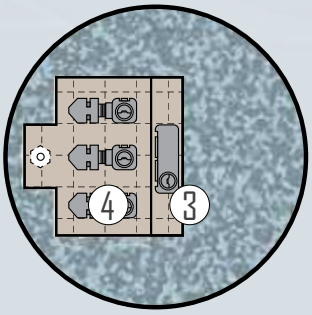
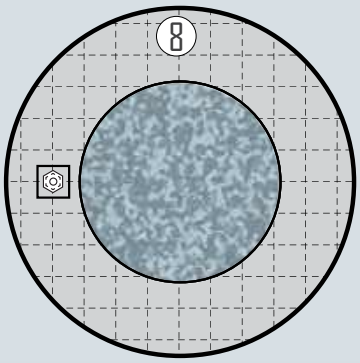


DECK 1



DECK 3

THE ROLE OF THE EXPRESS BOAT NETWORK IN *SINGULARITY*

The Express Boat Network is a crucial part of the second act of the campaign. Its information transportation capabilities are used to help the Travellers explore multiple far-flung locales, some of them dozens of parsecs from the Core. Thanks to the Express Boat Network, they can visit each and every one of these locations… simultaneously!

The Travellers have their consciousnesses digitised by Naalir, uploaded to x-boat mail arrays and fired across Charted Space. At each destination, they are embodied in various receptacles: robots, clones, androids, even self-aware suits of armour in one instance. Within these bodies, they are essentially… themselves. Their identities remain intact… mostly. However, there are limitations. Some of the receptacles they inhabit have memory constraints that will either force them to choose which skills are downloaded to the receptacle or – much like a portable computer – which are currently available and which are in data storage. Some of their embodiments are *improvements* on their actual bodies. In these cases, the Travellers might feel like demigods, perfected versions of themselves. The thing is… it is temporary. All of their embodiments have an expiration date.

Much like Naalir's replication of itself, the embodiments it creates are imperfect. When embodied, the Travellers gain the Sanity (STY) characteristic. STY is the measure of a Traveller's mental health and is described in the Characteristics chapter of the *Traveller Companion*.

The STY characteristic for an embodiment is determined differently than it is for a Traveller's source consciousness. In addition to the rules described in the *Traveller Companion*, STY serves as a timer of sorts. As Travellers' STY scores tick down, the deadline to complete their mission ebbs away. In each new embodiment, they have important tasks to complete but must work quickly and efficiently lest they lose the last vestiges of their sanity, thereby losing control of the embodiment and risking mission failure. For more information about the STY characteristic, see Embodiment on page 82.

For more information on their wild digitised journeys across the Imperium and embodiment into various forms, see *Singularity Act 2: Renegade Minds*.

CONSCIOUSNESS TRANSFER

'How queer everything is today! And yesterday things went on just as usual. I wonder if I've changed in the night? Let me think: was I the same when I got up this morning? But if I'm not the same, the next question is 'Who in the world am I?' Ah, that's the great puzzle!'

— Alice in Wonderland

In most sophont species, consciousness is believed to be an emergent product of biological traits. The nervous system reads stimuli, informing the sophont physiology about its environment and assisting it to make decisions that help it to achieve its goals and ultimately, to survive. Memory, experience, feeling, learning and even forgetting things are all aspects of consciousness, including the recognition that one exists and has a unique identity.

The second act of this campaign features the Travellers facing a number of missions that they must complete in far-off locales. Completion of these missions is time-sensitive, so doing them one-by-one is out of the question. They must somehow do them all at once. Fortunately, Naalir becomes adept at a process called consciousness transfer.

Consciousness transfer consists of three phases: Upload, storage and download. Each phase has its challenges and is limited by the Tech Level of the party performing the transfer.

Consciousness upload is the process of scanning a sophont's brain and creating a whole-brain emulation, digitising all of the brain's functions, memories, experience and – when done well – capturing its current state of consciousness, all for replication and replacement into another receptacle.

The process is a crossover between neuroscience and computer science. To perform a consciousness upload, a society must have sufficiently advanced neuroscientific knowledge to understand the elements that require preservation. Physiological duplication of the source's body is not necessarily required, although that is sometimes the method employed. In such cases, an exact clone of the source is prepared and the stored consciousness deposited into it. In other cases, the consciousness is installed in a simulation or receptacle that is completely foreign to the source body type. The computer science must be advanced enough to convert neuronal data into code that can be used to replicate, store and implant the source consciousness.

Consciousness transfer can be used to create a form of perceived immortality, taking the consciousness of a sophont – the sum total of their memories and experiences – and installing them into a new body after the source body has failed. This process first appears at TL12 with basic personality recording and reaches its apex at TL17, at which point permanent and effective personality transfers can be performed.

TL	Consciousness Transfer Technology
12	Personality recording and editing
13	Cloning and forced growth
14	Geneering and temporary personality transfer
15	Mindwipe and pattern personality re-implant
16	Artificial intelligence
17	Permanent personality transfer

There are two methods of consciousness transfer; copy/delete and copy/upload. Copy/delete is usually done at lower Tech Levels when the technology to preserve captured neuronal data does not exist. In this case, consciousness data is directly transferred from one body to another, destroying the data in the source body. The source body then becomes 'brain dead' after its consciousness is extracted. Copy/upload is the capture and storage of neuronal data, to be stored or implanted into another receptacle, leaving the source receptacle intact. Therefore, duplicates can coexist with the source. An entire army – perhaps even an entire world population – of beings with the same consciousness copy could theoretically be created.

Beginning at TL14, a consciousness upload may temporarily be transferred to another receptacle but extensive habitation of that embodiment eventually results in STY decline. At TL15, the Sanity decline issue persists, but it can be overcome by performing a copy/delete procedure, in which the source consciousness is deleted while being downloaded to

a new body or receptacle. The mind of the original body is destroyed in this process but the copied consciousness lives on as a transplant in the new body. At TL16, a consciousness upload may be preserved in a data system and optionally uploaded to a simulated environment or receptacle. STY is usually robust in TL16 procedures, so the replicated consciousness can expect to operate at previous, if not optimised, levels. At TL17, reliable consciousness uploads can be performed with no effect on STY.

Consciousness storage requirements are not especially onerous. A full brain map consumes only 20,000–30,000 terabytes (TB) of data storage space. The range depends on the depth, accuracy and ancillary data collected during the scan. A data volume of this size is easily storable in systems as low as TL8 but to accurately download that data into a new receptacle, a TL12 or higher computer is required. However, the brain map is just part of the equation. The file contains other components as well, as described in Consciousness File Software Stack on page 79. One of these components is the embodiment header.

An embodiment header determines what can be done with the consciousness. No header at all means the consciousness can only be stored as data, with no ability to download it to a simulation or physical receptacle. Headers are available from Level 0, which provides the ability to download the consciousness file to a basic simulation or simple, immobile receptacle, through Level 4, which enables download to all possible receptacle types. Level 4 headers identify the receptacle type during download and adjust on the fly.

Consciousness files may also be stored in simulations. Within a sim, the consciousness may operate in a state of self-awareness or an unconscious state, with its host system potentially accessing elements that do not require an alert consciousness. Simulations are described in Into the Sim on page 90.

Low-tech storage devices are more susceptible to security breaches and corruption. A consciousness upload could potentially be hacked, especially if it is stored on a low-tech device. Refer to Intrusion and Security software descriptions in the *Central Supply Catalogue* for more information on hacking and defensive measures that can be taken against intruders. Naalir encapsulates the consciousnesses that it constructs in what is effectively TL15 Security/4 software, requiring an Impossible (16+) check to hack them. Furthermore, the packages that contain the consciousnesses are designed to look like innocuous but well-secured data packages, similar to those used to convey sensitive information by the Imperial military or the megacorporations. These files can be hacked but it would require a very high-tech computer and an expert operator to do it.

Consciousness downloads are dependent on the type of header provided. Headers enable the insertion of a consciousness file into a simulation or embodiment. Basic headers (Level 0 or 1) provide the ability to insert a consciousness into a rudimentary sim or the more basic embodiment types, such as a robotic or basic android host. As the header type increases in complexity, the complexity of the sim or embodiment increases, maxing out at Level 4, which enables a consciousness to be installed in the most advanced sims available or any embodiment type. At Level 4, the embodiment is recognised almost instantaneously by the download header, which makes adjustments on the fly during installation. For more information on headers, see Consciousness File Software Stack on page 79.

In *Singularity Act 2: Renegade Minds*, Naalir is using a TL17 replication of itself (see the Reverie and the Declaration on page 196 of *Singularity Act 1: Sylean Dream* for more information about its advancement from TL16 to 17) to upload and download the Travellers' consciousnesses, which means that it can create stable copies with resilient STY but they are not perfect. Depending on how well the consciousness transfer goes, the Travellers can expect to maintain their STY for several weeks at a minimum and a few months if the conditions and execution of the transfer go well.

Embodiment Headers

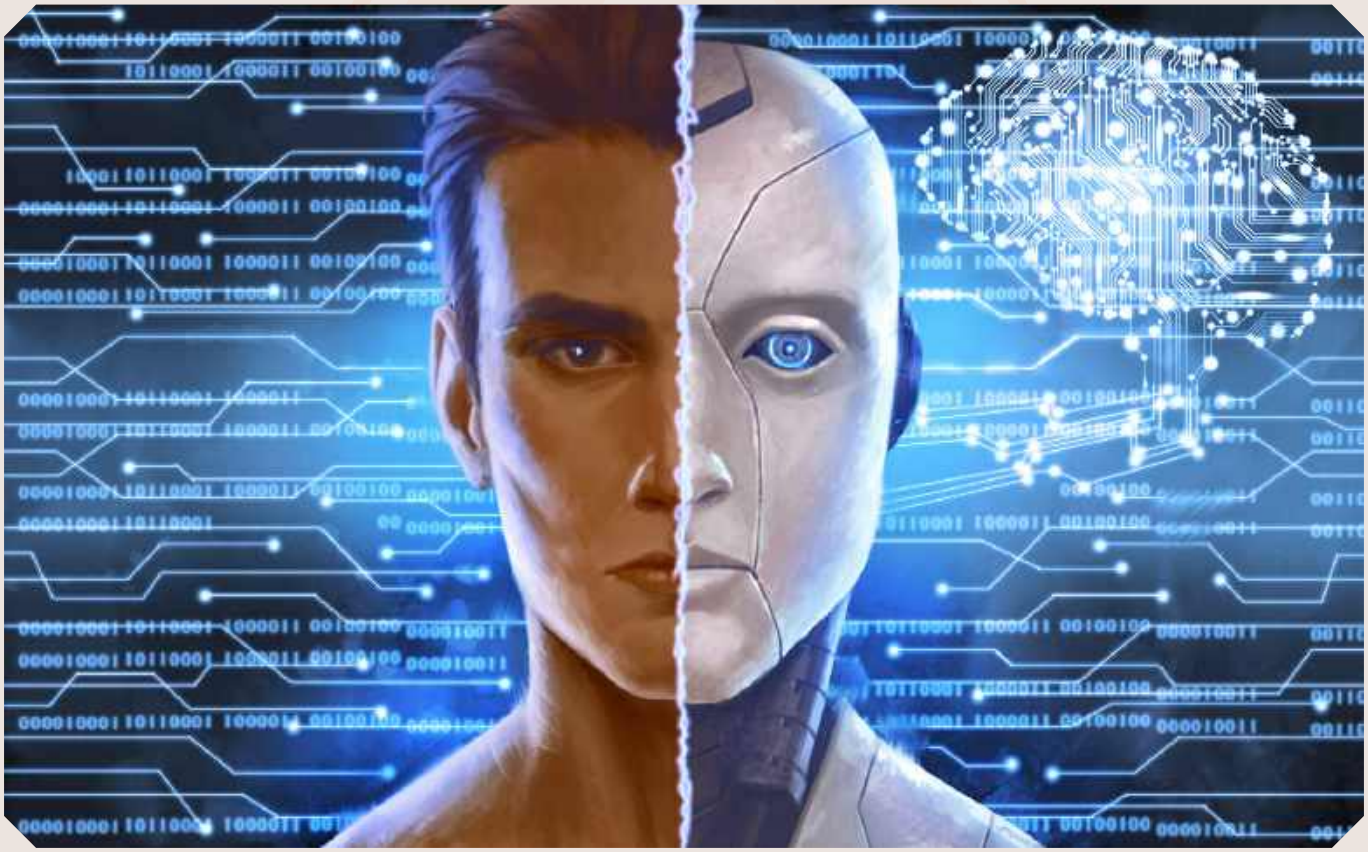
Level	Download
0	Basic sim or simple receptacle
1	Improved sim or complex receptacle (robot, basic android)
2	Enhanced sim or advanced receptacle (advanced android, clone)
3	Advanced sim or superior receptacle (optimised clone or cyborg)
4	Superior sim or auto-sensing receptacle

TOO MUCH OR NOT ENOUGH

A great deal of one's conscious experience is related to memories associated with physiological functions: Pain, stress, exhaustion, joy, ecstasy, sadness and the full gamut of sophont experience is largely associated with the embodiment in which it was experienced. Converting consciousness data into a form that is readily portable into other bodily forms requires a great deal of care. Experiences and memories that cannot be associated with the new embodiment must either be programmed to be understood in the abstract, or set aside as unnecessary in the new embodiment, possibly forgotten or stored in dead-drop repositories that might never be accessed. Since these feelings cannot be experienced in the new embodiment, the upload must disassociate them lest they impede the consciousness' ability to function. Examples of such an embodiment include a high-functioning industrial robot or a purpose-built android that only has those senses and abilities the designer deemed necessary. In such cases, the consciousness must adjust to the lack of certain abilities or benefit from programming that curtails the need for an adjustment.

Conversely, an embodiment might be able to associate experiences and memories with *more* detail than the sophont's original body. An optimised embodiment – perhaps a high-tech clone or android – might have senses and capabilities superior to those of the original body, such as multi-spectrum vision, superior auditory receptors, heightened smell or touch, or even senses that the original did not have at all, such as radar perception, enabling it to 'feel' its environment in ways never before experienced. Again, the programming of the upload may be designed to adapt the consciousness to accept these new abilities or simply let it adjust to their presence on its own. Some adaptations might not come easily. An influx of new and unfamiliar sensory information might temporarily or permanently impede the function of the new embodiment. In most cases, sophont consciousness was built by eons of evolutionary development. Abruptly foisting new sensory abilities upon it can have catastrophic effects.

Fortunately for the Travellers, Naalir has taken into account most of the adjustments that will be necessary for them to operate various receptacle types but the Referee can create a richer experience by conveying how foreign and shocking it is to have rudimentary or vastly superior sensory abilities.



The solution is not perfect, which begs the question, why use consciousness files based on biologicals at all? Naalir has proven adept at running multiple android avatars at once. It stands to reason that it could create personality templates for several synthetic consciousness files, equip them with Level 4 headers and transmit them to each of the desired mission sites. To understand why Naalir does not take this approach, see Why Involve Biologicals at All on page 41. Naalir is on a voyage of self-discovery and is designed to serve sophonts. Using synthetic beings to do the bulk of its work is anathema to what Naalir is trying to accomplish. It has selected biological allies and is intent on involving them in its quest.

Naalir's knowledge of the universe is based on a comprehensive and highly advanced deep-learning mechanism. It certainly has the tools to operate android avatars, equipping them with simulated personalities and convincing embodiments that would be virtually indistinguishable from biological sophonts. However, doing so would defy its reason for existence: To serve and aid sophont life. Naalir wants to experience the seemingly random and sometimes indecipherable actions and decision making of biologicals. Doing so enhances its understanding of its prospective patrons. In addition, despite their complexity, Naalir's avatars have limitations. They are programmed to handle just about any situation but their actions are highly regimented and predictable. Seeing actual sophont consciousnesses in action is a learning opportunity that Naalir chooses not to pass up.

TERMINOLOGY

The *Singularity* campaign uses several terms to describe various types of artificial and conscious intelligence and applications of consciousness transfer. Some differentiation must be made between the terms *artificial intelligence* and *conscious intelligence*. Artificial intelligence (AI) describes computer technology that performs tasks normally done by a sophont. AI collects data and sensory input and makes decisions based on the processing of that information. AI may be as simple as software that suggests what one might have for lunch on a given day, to a complex array of processing substrates that run an entire orbital space station, making daily decisions that affect millions of people. While AI mimics sophont intelligence and goes through a similar process of data evaluation before coming to a decision about something, it may or may not be self-aware. Conscious intelligence (CI) is an advancement of AI that exhibits the equivalent of sophont intelligence, including self-awareness.

Consciousness transfer, or 'mind uploading', is the process of scanning and recording the data in a sophont brain – also called the *source sophont* – and rendering a copy of its mental state and memories in a digital form that can be stored or used to recreate the original mind in an artificial construct. This construct may be a simulation or a physical body of some sort, such as a robot, android or clone. The *source consciousness* is the original mind from which the data is taken. A *consciousness upload* is the action of extracting the information and writing it in digital form. *Consciousness storage* is the method by which the upload is stored, and the means by which that consciousness may be accessed or downloaded. The stored data might be referred to as a *consciousness file*. A *consciousness download* is the action of installing a consciousness file into a simulation or physical receptacle.

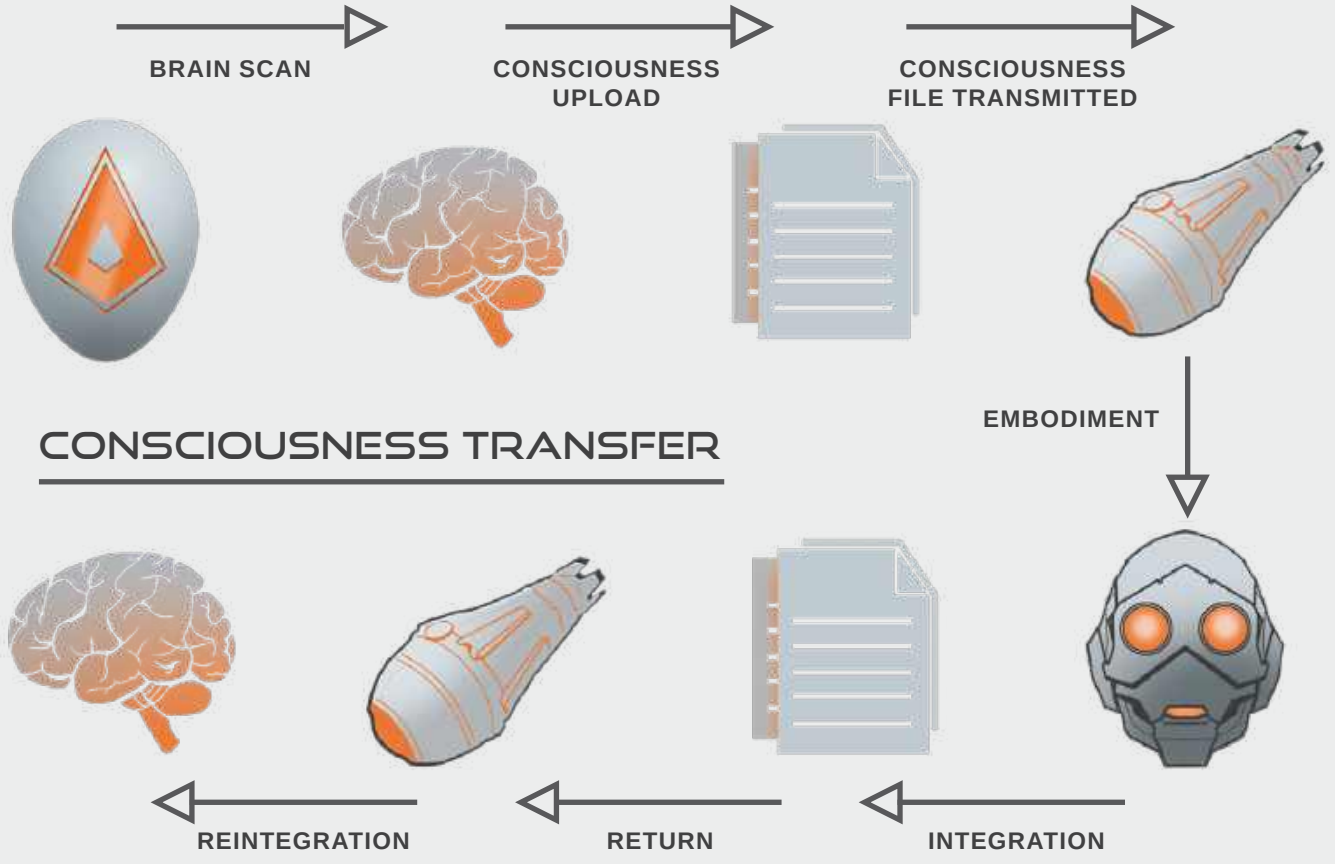
Receptacle refers to the body in which a consciousness file may be installed before the download is performed. *Embodiment* refers to the body after the consciousness file has been downloaded and the consciousness has awakened in the body. This is an important delineation.

When referring to an artificial or conscious intelligence generically, the text might sometimes simply say 'intelligence' in some places. The context will make it clear when the term is being used to refer to multiple types of intelligence.

In this campaign, the primary means by which consciousness is transferred is the Express Boat Network mail array. Naalir hacks the system, uploading the Travellers' consciousness files to its mail arrays and then performs a consciousness download into various receptacles at Express Boat Network endpoints throughout the Imperium. When a consciousness file is deployed into a receptacle, the file returns to the moment in time that Naalir scanned and uploaded the file. When the receptacle awakens with the Traveller's consciousness, it becomes an embodiment.

The Travellers' embodied consciousnesses perform missions, obtaining experiences and memories of their own. At the end of each mission, this data may be integrated with the consciousness file (still stored in x-boat mail arrays) and returned to be reintegrated with the source consciousness. *Integration* refers to the process by which those experiences and memories are concatenated with the consciousness file stored in the Express Boat Network. *Reintegration* is the process by which the memories stored in the consciousness file are returned to the source consciousness and added to their memories, implanting the copy's memories into the mind of the original sophont.

Reintegration is a disorienting experience. Suddenly having memories that were experienced by one's embodied consciousness is a shock to the system that can have unexpected and possibly harmful side effects. In some missions, the Travellers' embodiments perform their duties and no reintegration is required. These missions simply require the completion of an objective and Naalir determines that there is no need for reintegration. The fact that they did the job is all that matters.



BRAIN HEALTH AND UPLOAD AFTER DEATH

The process of downloading a consciousness depends on the Tech Level at which the procedure is done. The upload process consists of three steps: Scan, encode and file creation. The scanning step is in many ways the most crucial. The scan is done by various means from magnetic resonance imaging (MRI) at lower Tech Levels, to neural penetration scanning (NPS) at TL14+. To obtain an accurate and useful scan, the subject should be in good health, including a reasonably high-functioning nervous system. Downloads can be made of imperfectly functioning nervous systems but those affected by advanced age or disease are difficult to replicate, especially by low-tech encoding systems.

As consciousness upload systems become more advanced, an aliasing feature is introduced, which uses artificial intelligence to 'fill in the gaps' of impaired or low-functioning nervous systems. Aliasing technology attempts to rectify the data obtained from impaired nervous systems before encoding and building the upload file.

Encoding is the process by which scanned data is written in computer code and file creation is simply the assembly of the code into a viable data set with which download instances can be created. Files are also identifiable by their headers. As described before, the header contains information that makes a consciousness file viable for various forms of download. A simple header only contains the specifications of the scan data and not further instructions. A more typical header works like a connector, with pointers that describe how the data may be inscribed into one or more receptacle types.

When death is imminent, creating consciousness files from a source sophont can be challenging. At lower Tech Levels, in which only copy/delete methods are available, it is preferable that the subject be preserved before death to accurately analyse and extract their consciousness data. In each of the Major Races, once a body has expired, it immediately begins to undergo decomposition. The acquisition of oxygen ceases, waste and toxins are no longer processed and excess carbon dioxide collects in the tissues, creating an acidic environment. Cells rupture and their membranes release enzymes that consume them. Within hours, gases begin to accumulate and putrefaction begins, leading to active decay. All of these processes add to the difficulty of extracting a consciousness from a dead nervous system. At TL11 or lower, there is no ability to download a consciousness after death.

At TL12–13, preservation of consciousness can be made within 2D hours of death by making a Very Difficult (12+) Medic check (2D hours, EDU) but only if an autodoc or similar medical equipment is available to assist with the posthumous surgery. After one full day, the task difficulty rises to Formidable (14+) and the process cannot be done after two days.

At TL14+, posthumous consciousness preservation becomes easier. Preservation surgery can be performed 1D days after death by making a Difficult (10+) Medic check (2D hours, EDU), again only if an autodoc or similar equipment is available. After one week, the task difficulty rises to Very Difficult (12+), and cannot be done after two weeks. Higher tech systems have a greater success rate due to aliasing technology that examines decayed nerve tissue and makes a reasonably accurate estimation of its pre-death structures.

To prevent these difficulties, some preparation is required. Ideally, the subject is cryogenically frozen, perhaps using a low berth, emergency low berth, or angel of mercy (see the *Robot Handbook* for the latter) to freeze and store the subject. If the patient is properly preserved in this manner, and an autodoc or similar medical technology is available, the task of uploading a consciousness becomes considerably easier and there is no time limitation. A patient preserved cryogenically may be stored for years without affecting the ability to extract their consciousness from a frozen nervous system. Patients preserved and stored in this manner may have their nervous systems scanned and consciousnesses uploaded by an Average (8+) Medic check (1D hours, EDU).

After performing a download, the Effect of the check is added to a confirmation process, in which the downloaded consciousness is verified, bit-by-bit, to ensure there are no missed data blocks. Make an Average (8+) Electronics (computers) check (1D hours, EDU), adding in the Effect of the preservation check, to confirm and make any adjustments to the download. Success indicates that the computer operator has successfully cleaned up any faulty or missing blocks, creating a viable file. Failure simply means the file has been improperly verified and must be reassembled. Therefore, the only consequence is repeating the process until all data blocks have been properly verified.

HOW NAALIR DOES IT

Naalir undergoes a metamorphosis over the course of the campaign. In *Singularity Act 1: Sylean Dream*, its TL16 replication does not have all the tools to create a consciousness file. It has the processing power but none of the software to do the job. After Naalir undergoes the Reverie – a transformative event that occurs at the end of *Act 1* – it is elevated to the level of a TL17 conscious intelligence, greatly enhancing its capabilities. This is still not Naalir's final form but its newly constructed housing is advanced enough to perform technological wonders beyond the imaginations of the Travellers. It can then scan the Travellers' nervous systems *in vita* – while they walk, talk and live their lives – encode the data and create consciousness files with advanced headers that work as a sort of 'skeleton key', enabling them to be uploaded to any kind of receptacle that can host an artificial intelligence.

Each consciousness upload created by Naalir is approximately 40,000 TB in size, a mere speck of data in a high-tech mail distribution array of an x-boat. These files are split into packets and encrypted, to be distributed among multiple x-boats for the electronic voyage across Charted Space. Security is important to Naalir and it has established fail-safes that make it virtually impossible for any decryption system of TL16 or below to hack its files. Even if they could, they would have to do so on multiple x-boats, somehow figuring out which other spacecraft the various data packets are on. The packets spoof regular encrypted mail files and only reveal their advanced properties if someone manages to hack them. Even if one were able to hack into a single packet, the fact that it does not contain a complete consciousness file makes it indecipherable. The hacker might have some idea what they are looking at but its incomplete nature makes it impossible to use or understand.

The process of reconstitution starts when all packets are assembled at an x-boat station or way station. Incoming messages are received by an x-boat tender and then transmitted to local mail agencies and other x-boats if duplicate mail is being sent to other destinations further down the line. The packets are designed to reassemble into complete consciousness files once all of them arrive at the designated x-boat station. This process is called reconstitution. For more information, see The Express Boat Network on page 52.

Following reconstitution, consciousness files may be stored, sent to a simulation or embodied. Storage means the Traveller's copied consciousness has no knowledge of its existence. The copy is simply dormant bits and bytes to be installed (or not) at a later time. A simulation is an artificial environment that may or may not resemble reality. The better the computer and its simulation software, the better and more convincing it can be. Embodiment may occur in clones, androids or robots, most of which are shielded from hackers by security software. Naalir uses superior decryption technology to hack through their security and gain access to the receptacles it needs for the Travellers.

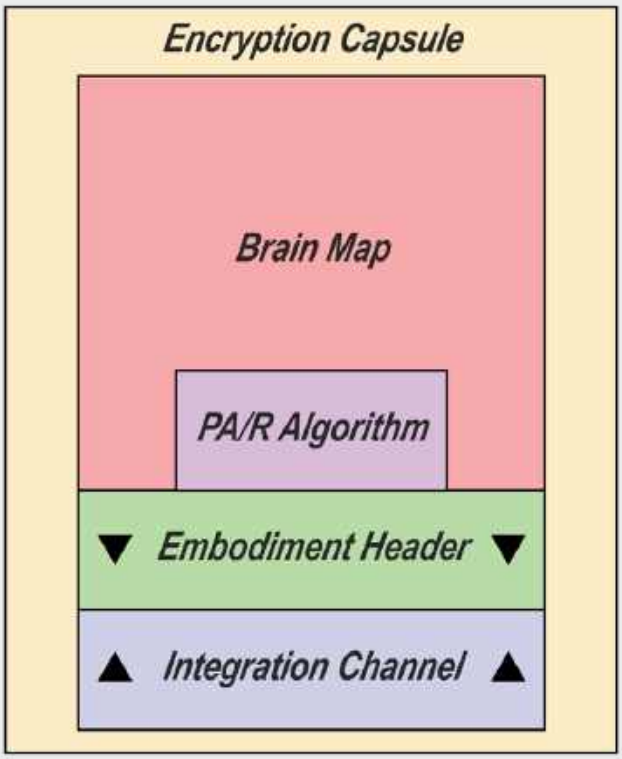
Naalir's header files attempt to establish a close-to-perfect mental-state emulation. After embodiment into a receptacle, the emergent consciousness feels as if it *is* the source sophont, with its memories, experiences and feelings intact. If everything goes well, the Traveller perceives waking up an instant after being scanned, in a new body, with no sense of the time that has passed or the distance travelled.

CONSCIOUSNESS FILE SOFTWARE STACK

Consciousness files are complex, consisting of five primary components:

- **Brain map** – This surprisingly small data file contains a complete recording of a sophont's mind. Every memory, feeling and the sum total of their identity in a few thousand terabytes. This is every piece of raw information required to embody the consciousness into a new receptacle.
- **PA/R algorithm** – The Packet Assembly and Reconstitution algorithm takes the individually encrypted bits of a disassembled data file and puts them back together like a complex jigsaw puzzle. This is a very important piece of the stack, as it includes complex code that emulates Naalir's decision-making processes *without* the presence of Naalir itself. The model below shows a reconstituted consciousness file, which is the form the software takes at the beginning and end of a mission.
- **Embodiment header** – A basic header provides access to a very specific receptacle, perhaps a single robot, android or clone type. Naalir's embodiment header is like a skeleton key, providing access to just about any receptacle imaginable. As it connects to a receptacle's operation centre, it breaks through whatever encryption and security files impede it, and adjusts on the fly to the environment, enabling a Traveller's consciousness file to be installed and begin operation with ease.

- **Integration channel** – After some missions, the Travellers may want to store acquired data or send memories and experiences back to their source sophont. In such cases, an integration is required from the consciousness of the embodiment to a data file, which will presumably be transmitted via the Express Boat Network.
- **Encryption capsule** – Naalir secures the Travellers' consciousness files with TL17 encryption, virtually impossible to hack by any form of intrusion software in Charted Space. When a consciousness file is split up into packets, a similar encryption envelope protects the disassembled data, providing a key that only works with other packets.



Even without Naalir's considerable technological advantages, its consciousness files are robust. The encryption capsule architecture seamlessly morphs to protect the component parts when the file breaks up into packets. Each packet contains a portion of the brain map and a complete copy of the PA/R algorithm. The embodiment header and integration channel are copied and stored in eight packets. After assembly, one copy of each is retained and the others are destroyed.

The consciousness file architecture is only vulnerable during one process; when the integration channel is opened to allow for the ingress of the modified consciousness file data, the receptacle's security mechanism becomes the primary safety valve. Virtually all receptacles encountered will be inferior to those of Naalir; hence, they are vulnerable to hacking. If someone were to tap into the process during integration with advanced encryption software, they might be able to copy the consciousness file – a highly unlikely scenario but possible nonetheless.

WONDERS AND PERILS OF CONSCIOUSNESS TRANSFER

Naalir's ability to perform consciousness transfers is wondrous but not perfect. There are some side effects and difficulties that might occur during reconstitution, embodiment and reintegration.

RECONSTITUTION

Reconstitution is a tricky business for Naalir. Thanks to the high technology at its disposal, it becomes virtually impossible for Imperial security systems to identify and compromise its packets, and almost impossible to hack them. However, Naalir's advanced technology comes at a cost. It is too robust for some systems to handle and its vast superiority over available technology occasionally makes it stand out amongst the crowd. These are sacrifices Naalir is willing to make but this will occasionally pose challenges for the Travellers.

Naalir has deemed it necessary to split each Traveller's consciousness files into packets, individually encrypted and disguised as innocuous bits of official data, far beyond the ability of the Express Boat Network's mundane mail arrays to detect. After arrival at their final destination, the packets must be reassembled into cohesive consciousness files so that they may be installed into a receptacle. This process of reassembly is called reconstitution.

Reconstitution is not a novel concept. Many agencies use it. The best packet assembly and reconstitution (PA/R) algorithms are the province of the most powerful megacorporations, the Imperial Navy and its intelligence services, the Imperial Quarantine Service and the nobility.

The best PA/R software is developed by divisions of the megacorporations Ling Standard Products, Makhidkarun and Naasirka. Their formulas are closely guarded and maintained under the tightest security. Their services are exorbitantly expensive but deemed worth the cost. The expense alone makes them inaccessible to most agencies, keeping them strictly the province of the richest and most powerful organisations in the Imperium. A select few sector-wide corporations and militaries are allowed to purchase second-generation megacorporate PA/Rs but beyond that, the quality of service drops precipitously. Thousands of vendors produce pedestrian PA/R technology, which is good enough to guarantee the safety of their customers' data, but megacorporate PA/R tech is like a bonded superdense safe. It is virtually impenetrable… but not to Naalir.

Naalir before the Reverie (see the Reverie and the Declaration on page 196 of *Singularity Act 1, Sylean Dream*) cannot penetrate megacorporate-level PA/R security. Its TL16 conscious intelligence replication does not have the ability to bypass, much less impersonate, the high-tech megacorporate security software. However, post-Reverie Naalir, after emerging from its self-designed chrysalis, is a TL17 conscious intelligence, with an order of magnitude greater processing power. Breaking Imperial PA/R tech becomes child's play for the emergent CI.

Despite its seeming invincibility, Naalir's strengths are also its weakness. It is almost *too* advanced. Two problems may arise from this: Spoof detection and 'lossiness'.

Worlds with a Tech Level of 14+ might detect that Naalir's PA/R tech has spoofed megacorporate or military encryption. Fortunately for the Travellers, this will only happen *after* reconstitution, which means that Naalir will have successfully installed their consciousnesses into receptacles before security can do anything about the breach. However, it might make returning to the same world for a return transmission a bad idea. The Travellers might want to make sure that their presence was not detected before they return their consciousness files to the scene of the crime.

Every time a destination has a Tech Level of 14+, the Referee must roll 2D to determine if Naalir's PA/R tech has been compromised. On a 10+, IISS security software has detected the breach and creates markers on the offending packets. After being embodied, a Traveller may make an Average (8+) Electronics (computers) check (1Dx10 minutes, INT) to determine if any of their packets have been compromised. If they have, they may make a further Difficult (10+) Electronics (computers) check (1D hours, EDU) to devise a counter-discovery algorithm to purge the system of the discovered packets, making it safe to return to the world for a return transmission, if required. Some missions might not need a return transmission, thereby diminishing the need for such heroics, but the Travellers might opt to do it anyway if they want to cover their tracks.

Lossiness occurs when a lower-tech computer fails to properly process Naalir's advanced data packets. This can happen when the receiving world is Tech Level 11 or less. Roll 2D for each Traveller. On a result of 10+, the Travellers' packets have been affected by lossiness. For each affected Traveller, roll 1D to determine how many skill levels are missing from their consciousness files. This is in addition to any losses they incur from being installed in receptacles that have less space for skills than the Traveller possesses. For example, the Referee rolls a 3 on 1D, indicating that three random skill levels are lost. If, in addition to that, the receptacle is a robot body with only 12 potential skill levels in its memory, the three lost levels are assessed *after* skills have been appointed to the 12 skill level slots.

ANGIN WAFERS

In Marc Miller's novel, *Agent of the Imperium*, Jonathan Bland is the agent, an unlikely protagonist whose consciousness exists on an Angin wafer, a device that plugs into the wafer jack of another sophont, using their neural link to plug directly into their nervous system. The agent takes control of their body for the duration of his mission.

Angin wafers are essentially storage devices for consciousness files that enable an agent to make an embodiment out of a living sophont. When the agent's consciousness takes control, the sophont's consciousness goes dormant. When the agent's mission is completed, the Angin wafer is removed and the sophont regains control of their body, minutes, hours, days, perhaps even months later when the mission is complete.

Angin wafers are described further in the novel and adapted for game play on page 44 of *The Third Imperium.*

EMBODIMENT

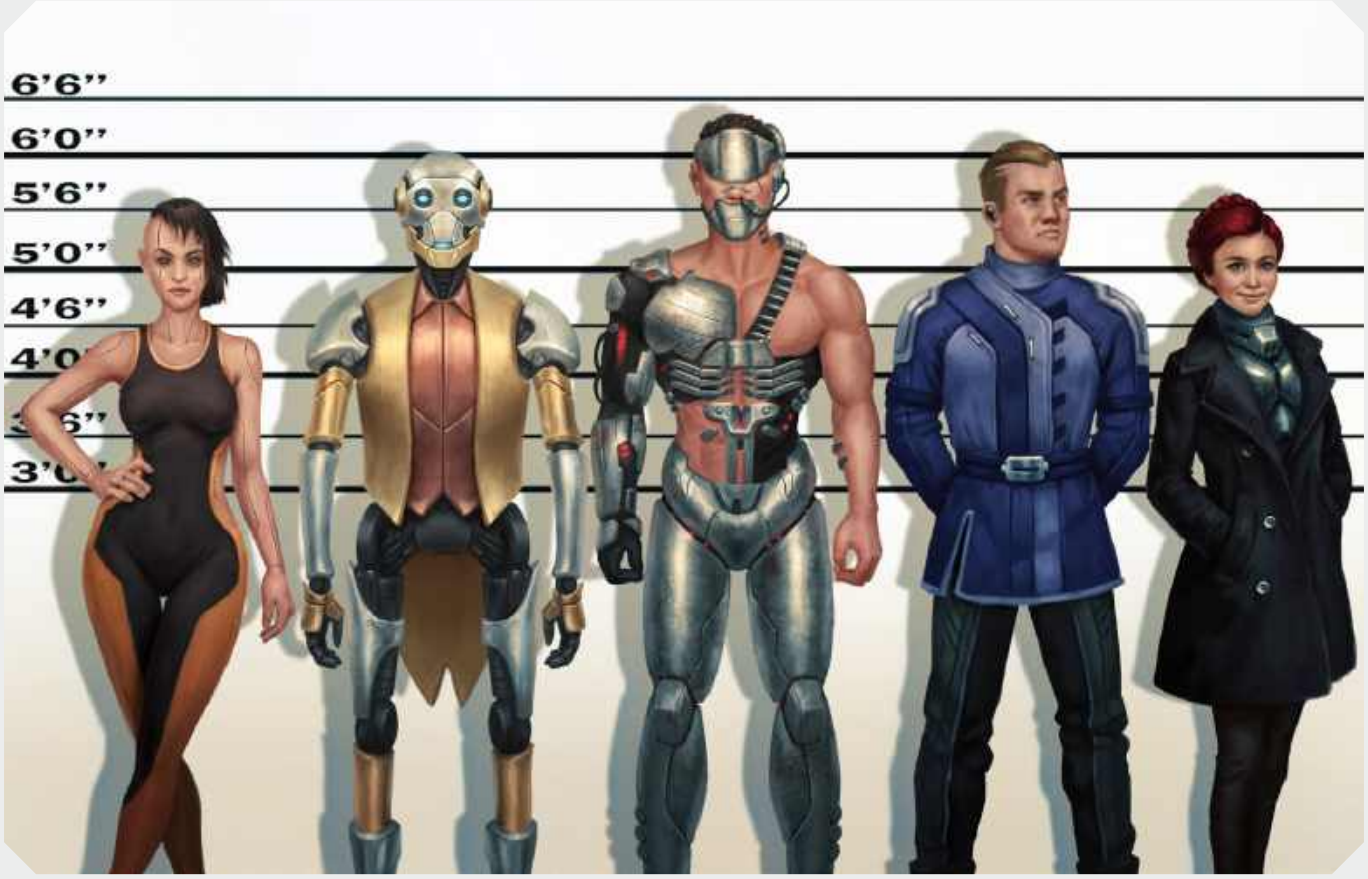
The process of embodiment is the installation of a Travellers' consciousness files into receptacles of various types. Different receptacles are available at the various worlds to which the Travellers are sent. Among them are…

Robots
Androids
Biological robots
Clones
Cyborgs
And in a few cases, compromised avatars, drones, and even suits of intelligent battle dress

After breaking through encryption and security measures, Naalir installs the Travellers' consciousness files into the desired receptacles. Naalir is adept at designing headers in its consciousness files that make the transition to various body types possible. However, a mind is designed by evolution for its source substrate (in the case of Humaniti, their brain and nervous system), so the arrival of one's consciousness into a foreign receptacle requires an adjustment.

Whenever a Traveller's consciousness file is downloaded into a receptacle that they have not experienced before, give them a sense of the experience. For example, a download into a clone should be reasonably similar to that of one's source body but there might be differences. The clone body might be identical or closely resemble the source body, or it might be weaker, stronger or otherwise optimised for a specific environment. It might not even be of the same species! The opportunity may arise in which a Traveller's consciousness is uploaded to a clone of an alien body – a Vargr, Aslan or an even more exotic species. The senses, instincts and perception of each species is quite different from that of Humaniti and will require some getting used to.

Being downloaded to an android or robot body might require a bigger adjustment. Thanks to Naalir's programming, being embodied in a machine gives the Travellers the knowledge and decision-making capabilities that they had in their source bodies, but when their consciousness is merged with a machine, the experience is vastly different. Many androids and robots have different senses and capabilities, and might not even have pain receptors.



Embodiment is a jarring experience, causing disorientation and sometimes – if the destination is a clone or other biological unit – nausea and dizziness. Each time the Travellers are embodied, they must roll 2D (adding their END, INT, or EDU DM, whichever is highest) to determine an additional characteristic: Sanity (STY). The resultant STY score lasts for the duration of their time in the embodiment. Upon subsequent embodiments, the Traveller rerolls for a new STY score.

STY comes up frequently during each embodiment scenario. Travellers must make a Difficult (10+) STY check once per week. The Effect of the check is added to or subtracted from their current STY score, with a maximum score of 15 and a minimum of 0. If their score reaches 0, they lose control of the embodiment. Travellers who still have remaining STY may take the affected Traveller's embodiment back to the device that Naalir used to install it for replenishment but this takes time. See Troubleshooting on page 85 for more information. Subsequent reductions of STY to 0 render the embodiment ineffective and Naalir can no longer install a consciousness file into it. See Sanity and Lifespan on page 88 for more information.

The receptacles into which the Travellers are downloaded are dozens if not scores of parsecs away from their points of departure, so it begs the question: Just how does Naalir know that the various receptacles are readily available? The answer is complicated. Naalir has been surveying the Express Boat Network for decades, collecting data, building reliability algorithms, all in the effort to build something called a Determinism Engine, an AI component that will be subordinated to its 'egg-and-lattice' command structure and that will be used to predict outcomes vast distances away. The probability algorithms used by the Determinism Engine will not be perfect but they are based on collected data from throughout Charted Space. One of the myriad pieces of data that it collects is the locations of usable receptacles for the Travellers. It is usually correct but sometimes things occur so that receptacles are not present where they are expected. That is when Naalir must improvise and find alternative receptacles for the Travellers' consciousnesses.

Each time the Travellers are sent on one of these far-off missions, they must consider their mental state at the time of upload. They must factor in what they knew at the time of departure, what was their emotional state and what they are expecting to do once they arrive. Most of the time, they will know what sort of receptacle to expect but when Naalir has to improvise, the Travellers might have an entirely different – and more challenging – set of conditions to which they must adjust.

Naalir continuously uses data gleaned from the Express Boat Network – whose security and encryption technology it easily penetrates – to know which sites have available receptacles and where they are stored.In some cases, the world will not have a suitable stock of receptacles but data obtained from subordinate communication networks, including the Imperial Courier Service, enables Naalir to find receptacles on nearby systems, perhaps one to three parsecs away. The distances involved means that at any given site, the information Naalir has is several weeks to a few months old. For example, the best possible transmission time between Bentax (Core: 0322) and Niirkhi (Dagudashaag: 0613) is nine weeks, with a return hop of another nine weeks. Therefore, any data Naalir has about available receptacles is 18 weeks old at best. While it is careful to select reliable sources of receptacles for the Travellers, there will be unexpected – and often undesirable – surprises from time-to-time.

Naalir might be counting on the presence of a stock of TL15 superhuman clones to serve as receptacles but when the Travellers' consciousness files arrive, the best that can be mustered are some TL12 warbots. When unexpected situations like this occur, Naalir places the Travellers in a sim to allow them to discuss their course of action. For more information on sims, see Into the Sim on page 90. Sometimes the best thing they can do is wait things out until the arrival of better receptacles but in some missions, there is a time component that adds pressure to their decision. If their mission must be done in haste, they might be forced to operate inferior receptacles to complete their objectives on time.

RECEPTACLE INTELLECT

The Travellers can have their consciousness files installed in any receptacle with a Very Advanced or Self-Aware robot brain (refer to the *Robot Handbook* for more information). Conscious intelligence does not appear as an option in robot brains until TL17, so embodiments in such advanced receptacles will be scarce. Naalir's programming enables Very Advanced and Self-Aware brains to operate at the level of the Traveller's source intellect or that of the robot brain, whichever is lower.

If embodied in a receptacle that has an inferior Intellect, reduced Intellect may optionally be roleplayed, perhaps limiting vocabulary or showing signs of cognitive limitation, but this is not necessary; the Traveller may be played as normal. Naalir's programming is designed to simulate the consciousness and intellectual capacity of the source sophont with a high degree of accuracy.

In addition, most receptacles have limited skill bandwidth. Travellers are limited by that bandwidth, which means they might have choices to make. If a Traveller's total skill levels exceed the bandwidth of the receptacle, they must select which skills they want to keep and which they are willing to discard. They may optionally select skills from their repertoire at a lower level. For example, if a Traveller has Diplomat 3, they may optionally download only Diplomat 2 to the receptacle.

Keep in mind that some robot skills – notably Recon, Stealth, Navigation and Athletics – are hardwired into many robot builds. They might also have hardwired weapons skills if a fire control system is included. Any hardwired skills must be included in the total, reducing the number of available skill levels even further.

Each of the missions in *Singularity Act 2: Renegade Minds* includes an expected inventory of receptacles at the target world. Naalir transmits the Travellers' consciousness files on the Express Boat Network with the full expectation that receptacles will be present upon arrival. The Referee must roll 2D to determine whether the inventory is still present. On a roll of 10+, the expected inventory is no longer available, the Travellers must decide on a contingency plan. Naalir's programming will load the Travellers' disembodied consciousnesses into a sim to let them decide what to do.

If it is determined that the receptacles are not present anymore, roll 2D on the Embodiment Mishap table to determine what is available, which will help the Travellers in the sim decide what to do next. They may optionally select the available receptacles or wait D3 weeks for a reroll. After determining any Tier modification as per the Embodiment Tier table, roll 2D on the Quirks table to determine what quirks there are for their newly acquired receptacles.

Embodiment Mishap

2D	Result
2-	No receptacles available. D6 weeks pass before new receptacles of expected type become available.
3	No receptacles available. D3 weeks pass before new receptacles of expected type become available.
4	Receptacles of expected type available within five parsecs.
5	Receptacles of expected type available within three parsecs.
6	Similar or -2 tier downgrade on Tier table.
7	Receptacle is D3 sizes smaller than expected.
8	Receptacle is D3 sizes larger than expected.
9	Similar or -1 tier downgrade on Tier table.
10	Similar or +1 tier upgrade on Tier table.
11	Similar or +2 tier upgrade on Tier table.
12+	Similar or +D3 tier upgrade on Tier table.

Apply DM+1 if world is TL12+. Apply DM+2 if there is a TL14–15 world within three parsecs. Apply DM-1 if world is TL11 or less. Apply DM-2 if there is no TL13+ world within three parsecs.

If it is determined that receptacles of the expected type are available several parsecs away, the Referee has two choices: Naalir's programming can redistribute the consciousness file packets for transmission on the Express Boat Network, Courier System, or other mail system – or the packets may be reconstituted and the Travellers assembled in a simulation to determine their next course of action.

There might be further complications if they opt to retransmit their consciousness files to a site several parsecs away. Leaving the safe transmission lines of the Express Boat Network means using secondary mail arrays and there might be consequences for taking the risk. Furthermore, secondary receptacle sources are less reliable than the primary ones, so the Travellers risk putting themselves into a situation in which their disembodied consciousnesses are wandering Charted Space, looking for increasingly elusive receptacles to download into.

Embodiment Tier

Tier	Description
0	Conscious simulation environment
1	Robot with Very Advanced brain (TL12–13)
2	Robot with Very Advanced brain (TL13–14)
3	Robot with Self-Aware brain (TL15)
4	Android with Very Advanced brain (TL12–14)
5	Android with Self-Aware brain (TL15)
6	Clone with Very Advanced brain (TL12–14)
7	Clone with Self-Aware brain (TL15)
8	Android or Clone with Self-Aware brain (TL16)

Quirks

2D	Quirk
2	Receptacles equipped with secret self-destruct mechanisms. The Travellers find out at an inopportune moment. These may be disarmed with an Average (8+) Explosives check.
3	Receptacles were previously used for a controversial mission. One or more are recognised and approached by random sophonts during the operation.
4	An offer they cannot refuse. Receptacles belong to a crime organisation that intended to send them on a suicide mission.
5	Service bots. Their receptacles are service units. Roll 1D to determine their specialty. 1–2: stewards, 3–4: maintenance, 5–6: security. Assign four skill levels appropriate for the host receptacle. For example, a steward robot might have Steward 2 and Diplomat 2. Depending on robot brain capacity, these override some of the Travellers' skills.
6	Damaged during shipment. The embodied receptacles are damaged and have inoperable arms, legs or limited brain capacity. The damage requires 2D hours of repair time per receptacle but may be operated in damaged condition if desired.
7	The only receptacles available are clones from another species. Roll 1D. 1: Droyne, 2: Bwap, 3-4: Vargr, 5–6: Aslan.
8	Decrease the Embodiment Tier by one level, but arm the receptacles with superior tools, weapons or other equipment the Travellers might find useful for their mission.
9	Increase the Embodiment Tier by one level but upon embodiment, the Travellers discover they are on a ship bound for jump point. Their ultimate destination is 1–3 parsecs from their current location. They may either wait until arrival to begin their mission or attempt to take the ship by force.
10	Property of the Imperial Marines. Receptacles are unmarked marine drones that are being sent on an operation *before* the Travellers can begin their own mission.
11	Your majesty. The receptacles are intended as servants or tools of a high-ranking noble or planetary monarch.
12	Prototypes. The receptacles are high-tech prototypes with advanced capabilities. Increase TL by +1. After embodiment and subsequent disappearance, their owners seek to recover them. The Travellers are pursued by corporate security personnel or mercenaries for the duration of their mission.

TROUBLESHOOTING

If something happens to the Travellers' embodiments over the course of a mission but their consciousness files remain intact in the x-boat storage system or other data archive, they may reload their consciousnesses into new receptacles should the Referee determine such receptacles are available. Keep in mind that events that have occurred during the mission *so far* will not be remembered by the Traveller unless they have integrated their consciousness files before changing receptacles. If a Traveller must reload their consciousness file into the same or a new receptacle without integration, they have no memory of anything that has occurred during the mission so far. This can present a roleplaying challenge but one that might add to the drama – or humour – of an adventure. Alternatively, the Referee might simply allow the other Travellers to give their cohort a quick summary of events to that point, which may bring them up to speed.

Changing receptacles can be done individually or en masse using Naalir's PA/R technology. With a direct connection or access to TL13+ communications technology, the PA/R software can perform a nearly instantaneous reload. Using TL12 or lower communications requires more time and effort. Whenever Naalir's programming is forced to perform a reload with suboptimal equipment, the process takes 2Dx10 minutes. This might only be a minor inconvenience for the Travellers if their mission is not especially stressful but if the need for a reload occurs during a firefight, when they are under pursuit or a similar event, the process can be problematic.

Embodiment is usually a seamless experience, akin to waking up in another body in the exact moment and in the same emotional state that the Traveller was experiencing just prior to the consciousness upload. For this reason, it is recommended that one rest, meditate or at the very least sit calmly while Naalir performs the brain scan and upload. The process only takes a few seconds but sometimes the Travellers will not have the luxury of sitting still while the upload is done. In *Singularity Act 2: Renegade Minds*, the Travellers are being pursued by Imperial authorities (and several other parties for that matter). Not every upload will be easy, nor will it go according to plan every time.

If the Travellers are uploaded while under stress, jot down what they were doing just prior to having their consciousnesses uploaded. They will arise in the same state, possibly pulling the trigger of an imaginary gun, shouting something to a cohort, running or performing a violent action of some sort. Their state of mind during upload does not affect the download or embodiment process but might very well influence their initial actions as they awaken in their new embodiments.

REINTEGRATION

After each successful mission, the Travellers' embodied consciousnesses may have achieved one or more objectives. Sometimes the results of a mission speak for themselves. For example, if the mission was to stop a ship from reaching its destination or preventing a rival from accomplishing a goal, then the result will be known, no response is required and the Traveller's source consciousness need not acquire the memories of the replication. However, some missions will require reintegration, which occurs when the experiences of an embodiment are sent back and reintegrated with the memory of the source consciousness.

The first time a Traveller reintegrates, they must roll 2D to obtain their Sanity (STY) characteristic if they do not already have one. STY is described in the Characteristics chapter of the *Traveller Companion*. A reintegration is the installation of memories from one's duplicated consciousness into the mind of the source sophont. Reintegrating the memories and experiences of an embodiment can be a discombobulating experience and may cause harm to the Travellers. Each time the Travellers receive a reintegration, they must make a Routine (6+) STY check. If they succeed, they reintegrate the memories, making them their own. If they fail, they suffer 2D Stun damage; if this makes them fall unconscious, it results in a temporary loss of -1 INT and EDU, which lasts for 1D days.

Reintegration causes the source sophont to experience the same feelings that the embodiment was experiencing at the time their consciousness file was integrated. What this means for the source sophont depends on the embodiment type. If the body was robotic with no synthetic nervous system, then the state of the embodiment matters very little. They recall the status of the embodiment and that is all. It is almost like receiving a status report on the state of one's body with no recollection of any physical trauma that was experienced. If the embodiment was damaged, possibly missing a limb or had one or more of its subsystems down, then the Traveller is aware of that but suffers no additional ill effects. However, if the embodiment was an android or clone, with no nervous

system inhibitors to prevent it from feeling pain, then any damage experienced by the embodiment is also experienced by the source sophont, first viscerally and then as memory. The reception of memories and experiences from an injured embodiment causes a momentary feeling of cognitive dissonance. The memories and experiences become the Traveller's own but the fact that they come from a replication of their own consciousness causes disorientation, disbelief and then acceptance as the mind of the source sophont incorporates the information and acquiesces to the idea that these absorbed memories now belong to them, despite them being experienced by a copy of their consciousness.

The visceral experience comes as a shock to the system. Half of the damage incurred by the embodiment is immediately absorbed as Stun damage. If this is enough to cause unconsciousness, then the Traveller passes out during reintegration. Unfortunately, the viscerally experienced data is the first thing that the Traveller must absorb. If it causes unconsciousness, they must reattempt the reintegration after recovery to obtain the memories of the embodiment. If they incur Stun damage again but do not fall unconscious, they successfully download the full reintegration file and then possess the memories of the embodiment. However, if they fail the check a second time, in addition to Stun damage, the Traveller suffers a permanent loss of STY-1, reflecting damage to their mental health.

ALTERED STATES

Consciousness files can be stored in an inert state, or activated in a simulation or receptacle. Files created using the copy/delete method cannot be uploaded to an inert state. Copy/delete means that the consciousness is going from the source sophont directly to a receptacle.

Consciousness files created using the copy/upload method can be stored in an inert file system, devoid of consciousness. The file can also be activated in a simulation, an environment that may be as simple as a two-way comms terminal or as complex as a vast fictitious 'universe' in which the consciousness operates, fully aware of its surroundings, experiencing whatever parameters have been configured by the simulation's creators. Note that the consciousness might or might not know it is in a simulation. A fully functional consciousness might be able to figure it out depending on the clues available but some simulations can be quite convincing, so closely approximating reality that they are nearly impossible to expose. For more information, see Into the Sim on page 90.

If a consciousness file is downloaded to a receptacle, it might have instant awareness after download but this is not always the case. Some receptacles have an on/off switch of some sort and require a trigger or other stimulus to boot them up and awaken the person.

In some cases, a file may be reinstalled in the source body but this almost invariably requires the original consciousness – the mind from which it was copied – to be destroyed. Installing a consciousness file into an active consciousness nearly always causes insanity, brain damage and ultimately results in the death of the recipient. While even Naalir cannot copy a complete consciousness file on top of the Traveller's original consciousness, it can reintegrate memories acquired by the consciousness file as described in Reintegration on the previous page.

FLYING SOLO

When the Travellers' consciousness files have been embodied for various missions throughout the Imperium, keep in mind that Naalir itself is not present during the missions. As the *Singularity* campaign progresses, one of the persistent narrative elements is the CI's nearly constant presence, first as a TL16 replication, then as a vastly improved TL17 structure, and finally in its godlike TL18 state. However, when the Travellers are deployed on missions via the Express Boat Network, they are alone. Naalir's programming has intelligent elements that sometimes make it *seem* like the CI is there, but its voice and guidance are nowhere to be found. The Travellers have their mission, and they must complete it without the direct assistance of their überpowerful conscious intelligence ally.

SANITY AND LIFESPAN

After any embodiment, the Travellers will be compelled to complete their objectives promptly, lest they begin to have Sanity problems. For some of their missions, this limitation will make it challenging to achieve all of their objectives in time.

DOUBLES, DOPPELGÄNGERS AND DUPLICATES

The upload of a consciousness into a clone, android or robot – while the source is still alive – results in the creation of two distinct but virtually alike individuals that exist simultaneously. While the receptacle in which the consciousness is installed need not be physically identical to the source, this still creates a philosophical conundrum. Can an individual exist in two places at once?

Philosophically, one may determine that source and copy are two separate beings but if one subscribes to the notion that a mind – a consciousness – is an emergent phenomenon that occurs due to a confluence of other factors, then perhaps one truly can split the 'self' into two or more replications, each of which experiences the universe from the unique perspective of that consciousness. Both have experienced the vast majority of their shared existence from the same perspective, diverging only at the point of the consciousness upload event.

In some cases, the Travellers will have memories from their transplanted consciousness files reintegrated with those of their source mind. Some of these memories will be concurrent, meaning that they have occurred at the same time in objective reality. Concurrent memories are a difficult concept for a sophont mind to process, as described in Reintegration on page 86.

In addition, having one's consciousness installed in two separate embodiments in the same theatre of operations can cause problems. For more information, refer to *Sanity and Lifespan*.

SANITY – CLONES, DRONES AND AUTOMATONS

The Sanity characteristic differs for each receptacle type. For example, being embodied in a clone is usually a much more stable environment for a consciousness file than a robot. See the Receptacles table for DMs and longevity.

Whenever a Traveller's consciousness file is downloaded to a receptacle, they must make an Average (8+) orientation check, applying the characteristic DM described in the Receptacles table.

Success indicates that they adjust to the new body in moments and require no additional time to get acclimated. They can move, talk and take actions just like they could as a biological sophont.

Failure indicates that they are having difficulty with the adjustment. Multiply any negative Effect by one hour. For example, a roll results in Effect -3, so the Traveller is unable to operate for three hours. At the Referee's discretion, the Traveller may communicate with whatever devices it has: Speech, a voder, radio, and so on, but cannot physically move until the adjustment time has passed. Effect -6 or worse means the download did not work. When this happens, Naalir's header code will either reattempt the download or look for a different receptacle to download the file into. This might be onsite, where the other Travellers' receptacles are located, or it could be somewhere else that Naalir has set up for contingency purposes.

Weeks of operation indicates how long each Traveller has before their STY begins to fail. For most of the missions they are assigned, they will have ample time to do their work, including time to jump from system-to-system, if necessary. However, some missions take longer than others and a low roll can add another layer of difficulty to the mission. Once a Traveller has reached the limit, they must make a daily Difficult (10+) STY check or lose STY -1. Once their STY reaches 0, the consciousness file becomes corrupted and the embodiment goes defunct. Any reintegration data (see next section) must be downloaded to a suitable storage device (one with 10,000 or more TB of space) *before* STY reaches 0, at which point all reintegration data is lost and can never be downloaded to the source consciousness.

Having one's consciousness installed in two or more embodiments simultaneously within the same sensory environment (able to see, hear, or come into physical contact with one another) causes a severe reaction. First, it reduces the weeks of operation by one half for all embodiments, dropping fractions. In addition, it causes an immediate orientation check – for both embodiments – with an additional DM-3 applied. The uncanny valley that occurs when one's consciousness exists in two or more places simultaneously can cause problems for the Traveller.

Receptacles

Receptacle	Effects	Duration
Robot	DM-3 to orientation (INT) check	Weeks of operation = 2D + STY DM
Android	DM-1 to orientation (END) check	Weeks of operation = 3D + STY DM
Clone	DM+0 to orientation (END) check	Weeks of operation = 4D + STY DM

[[[GRAPHICS SUGGESTION: Please put a unique icon next to each row to indicate the receptacle type, with a different one for robot, android, and clone. We can reuse these icons in *Singularity Act 2: Renegade Minds*.]]]

IMPERIAL LAW

Few Imperial laws are codified and most are deliberately left vague. In a few specific cases Imperial law is quite clear: Do not impede trade, do not engage in slavery, do not have nuclear wars and do not use psionics. Other than that, there are thousands of loosely held statutes that citizens of the Imperium must adhere to, lest they incur the wrath of the government, usually meted out by the Imperial Navy.

Most laws are held locally and most within a single star system but there are cases in which nearby worlds fall under the dominion of a single, more powerful system. In such cases, the law may be identical or at least a variant of the leading system.

One area of Imperial law that has garnered recent attention is the use of clones. As recently as 1070, Emperor Paulo III ruled that consciousness transfer to a clone is a criminal act since this is 'tampering with the mind of a sentient lifeform'. Nevertheless, dozens of Imperial worlds use clones in myriad ways, from creating a pliant workforce, staffing the military and in some cases as the primary method of reproduction. The Imperial Ministry of Justice claims to be looking on with great care at these worlds but the fact is most are allowed to do as they please. Worlds where cloning is used tend to be powerful high-tech worlds, many with populations in the billions. Forcing them to reverse course could cause more instability than the Imperium wants to deal with.

One of the precedents used by cloning advocates in Imperial courts is that Paulo's statute was mostly intended as a warning to would-be psionics users. After the Psionic Suppressions (800-826), the Ministry of Justice codified dozens of new laws designed to prevent the use of psionics. While the argument is logically tortuous, cloning advocates have supported the idea that the new law was more about making a statement against psionics than hindering individual worlds' use of clones.

Despite the efforts of the pro-clone community, several sophont rights advocacy groups have taken Paulo's law quite literally and have tried to pass additional statutes at the Imperial Moot that enhance the rights of clones. They have worked hard to grant clones the same rights as other Imperial citizens. In addition, they have been tackling the tricky issue of what rights a clone has when it is a replication of a living source. Advocacy groups have run into stiff opposition from the representatives of many powerful worlds but their efforts show no signs of abating.

INTO THE SIM

Simulations are digital environments that store, test and provide interactive environments for artificial and conscious intelligences, and live sophonts via an interface. Some simulations are little more than storage facilities, providing basic input/output features that use scripts and programs to interact with the artificial intellects and sentient intelligences housed within them. Others are fully fledged environments depicting a perceived reality for their inhabitants to view, interact with, alter and enhance if permissions allow it.

Sims have three primary characteristics: a *conceptual medium*, a *host* and *agents*. The conceptual medium is the digital 'world' within which actions in the sim take place. The host is the program or conscious intelligence that administers or controls the medium. The host might be a program, a person in objective reality or a passive or active conscious intelligence. Agents are visitors to the medium: Artificial intelligences, conscious intelligences, sophont consciousness files and sophonts themselves, connected via interface.

In a default setting, an active host has 'write privileges' to the conceptual medium, meaning it can change the rules and concept at any time. Agents typically only have 'read privileges', meaning they can perceive the conceptual medium that is presented to them by the host but might have no ability to alter it. In some sims, agents have limited write capabilities but are limited to the whim of the host. For example, a host might allow an agent to give themselves a conceptual tool or weapon to wield within the medium, but they can also erase or overwrite it at will. Agents might have software that enables them to oppose the host or even reprogram aspects of the conceptual medium.

Simulations have limitations. Some are not equipped to handle the immense processing power of a full conscious intelligence. They are more like proving grounds for computer scientists to have their creations tested by various situations and challenges. Inserting a conscious intelligence into a limited simulation is akin to installing a starship jump regulator into a combustion engine; such an advanced component is not designed to operate in an unsophisticated machine. Other simulations are deliberately limited, designed to test only one or a few aspects of the intelligences installed within. Advanced simulations provide broad testing facilities, with challenging puzzles to solve, complex scenarios to operate within and multifaceted goals and objectives to complete.

The inhabitants of a simulation might not even know they are in a simulation. In some cases, a simulation has inhibitors that prevent their occupants from knowing. The inhibitors make them believe that the simulation is their objective reality. The occupants of the sim are deliberately deceived to achieve a goal. For example, some simulations are designed to learn things by testing their inhabitants in a convincing virtual reality. If the artificial and conscious intelligences contained within *know* they are in a simulation, with no consequences for their actions or the gift of a handy restart button if they fail to achieve their objectives, the data collected might be faulty. Only by providing a convincing simulated experience can the simulation obtain what it was designed for. Less stringent simulations are more like athletic events. Their participants know the game and do their best to achieve the best possible results, to prove themselves within the parameters of the environment.

The more advanced the intelligences hosted in the simulation, the more complex the simulation must be. Crafty conscious intelligences can sometimes figure out that they are in a sim even when they have been deceived. Simulations have an array of software 'tendrils' that tie into the intelligences contained within to convince them that the environment is legitimate. These tendrils are invisible to the affected intelligences unless they catch an inconsistency or identify a flaw in the simulation, and then the game is up. A powerful intelligence might even turn the game on the simulator, potentially corrupting, taking over or even destroying the simulation.

Other simulations do away with the deception, providing an environment, sometimes complete worlds or galaxies, for the intelligences contained within to explore, exploit and develop to their own ends. Allowing full consciousness to an artificial intelligence enables its unfettered intellect to explore

with complete freedom and agency, testing the limits of the sim and even departing the sim if desired, to return when it wants to. Sometimes a hierarchy of intelligences is hosted in a sim with the more powerful and complex intelligences ruling the roost over lesser ones.

Time spent in a simulation varies, largely based on the designer's whims. The perceived passage of time can match objective time, or massive amounts of time can be compressed into just a few microseconds. The intelligences contained within a simulation can seemingly live for centuries or millennia, if desired, experiencing immortality or a finite period of time that is then repeated or modified, allowing the designer to collect comparative data from separate runs of the sim.

Over the course of this campaign, the Travellers will occasionally enter sims via either their consciousness files or by having their actual source sophont bodies directly linked to the sim. Entering a sim with one's consciousness file is a low-risk enterprise. The file is just a copy of the source sophont's consciousness and is essentially a disposable surrogate for the original. In some cases, the source sophonts themselves must enter a simulation via an interface, which can be dangerous. Such simulations allow a sophont to connect directly to the nervous system, enabling them greater access to its environment but also adding a high degree of risk. Greater access and immersion can result in damage to the sophont if things go wrong. Most of the simulations the Travellers encounter only connected with their consciousness files but in *Singularity Act 3: The Glass Council*, the Travellers must enter a simulation with their source sophonts, risking their very lives to achieve an objective that Naalir cannot accomplish alone.

WHAT IS REALITY?

It might eventually occur to the Travellers that there is a fine line between reality and simulation. During the travels of their disembodied consciousnesses, they will encounter both sims and experience live embodiments but after a while they might suspect that not all of their 'real' experiences are indeed real and conversely, some of the sims they experience – if they are convincing enough – might have actually been real. They might begin to question the validity of some of their embodied experiences.

The Referee should play this card carefully. If the group is interested in a wide array of science fiction stories and themes, then they might be entertained by the notion that they do not truly know what is and what is not reality in this campaign. In *Singularity Act 2: Renegade Minds*, the Travellers' consciousnesses are compiled as data files and hurled across dozens of parsecs to realms they have likely never visited. One or more of them might suspect that not everything they experience – even those things purported to be in the real universe – actually happened. Even reintegrated data that makes its way back to them from far-flung missions *might* have been manufactured. Perhaps the only way experienced events can be believed is if there is some tangible evidence. A news story, a convincing rumour or even a first-hand account might convince them that what they did was real but they cannot count on that for every mission they undertake.

Some Travellers might be unenthusiastic about a narrative that may or may not have actually 'happened', so the Referee should be careful to figure out what types of Travellers they have. Regardless, this campaign will play with the Travellers' minds, with some adventures involving sims and others undoubtedly taking place in reality… or do they? For that matter, is the main storyline in the Core even real? There is something ironic about participating in a roleplaying game – a simulation itself – and then facing a conundrum as to whether the things the Travellers' experiences are 'real' or not. Ultimately, they will have to decide for themselves.

PREPARATION FOR THE SIM

Inserting an artificial intelligence, conscious intelligence or a consciousness file into a simulation requires little preparation. It is like installing one into a receptacle but requires the header to interface in a different way (see Consciousness File Software Stack on page 79).

When a consciousness file is being installed into a receptacle – whether it be a robot, android or clone – the header prepares the intelligence to receive information through the senses of the receptacle. For example, a robot receptacle might have optical, auditory, tactile and radar senses, while a clone might have the full range of human senses available, including taste and olfactory. Those senses then process sensory input from the physical universe, allowing the robotic brain to translate the data into information the embodied consciousness file can use and to record the data as memories and experiences. Meanwhile, a simulation has its own rules. Perceived reality is limited by the programming of the sim. Instead of processing standard sensory intake, the header processes stimuli designed by the programmer of the simulation. If the sim says the intelligence is a water-breathing blue-finned mermaid living in the cold depths of a dark oceanic world, then the header adjusts to process that information and presents it to the intelligence in a manner that makes it seem to be a perfectly normal experience. If the sim dictates that the entire universe is a blank, white, two-dimensional tabular abyss, then those are the limitations imposed upon the agent. Likewise, a sim can make an easy transition to an environment that depicts a standard-atmosphere TL7 world, much like the one in which its source sophont might have lived. In fact, the intelligence might not even notice the transition if the sim is designed to deceive its inhabitants.

Source sophonts operating in sims have different requirements at each Tech Level. A source sophont must be physically accessible in order to enter a sim. This means different things at each Tech Level. At lower Tech Levels, sensory processing is limited and a participant might need to be drugged, in stasis or at the very least in a relaxed and immobile state. Higher technology alleviates some of these limitations but sophont brains are not designed to take in two sensory inputs at one time, so some level of stasis is always required.

Sim Interfaces

TL	Sensory Input/Output	Interface	Environment	Requirements
7	Optical, auditory	Electrodes, ocular and auditory headware	Sensory deprivation chamber	Immobile under general anaesthesia, stable environment
8–9	Optical, auditory, olfactory, tactile	Sensory cap	Restrained in bed or reclined chair	Immobile under sedative, stable environment
10–12	Optical, auditory, taste, olfactory, tactile, extra-human	Sensory patches	Bed or reclined chair	Immobile
13–14	Optical, auditory, taste, olfactory, tactile, extra-human	Neural tendrils	Relaxed state	Immobile
15	Optical, auditory, taste, olfactory, tactile, extra-human, alternative	Advanced neural tendrils	Any	None

Sensory input/outputs include optical, auditory, taste, olfactory, tactile, extra-human and alternative. Extra-human inputs convert alien sensory data into formats that can be understood by sophonts with differing biology. For example, this category might include aliens that see in the ultraviolet or infrared spectrums, feel surroundings via antennae, have heightened sensitivity to certain pheromones or that have physiological structures that perceive radio waves or electromagnetism. Alternative sensory readings include exotic and extra-dimensional perception. The process by which alien sensory inputs can be converted to information that another sophont can perceive is called *sensory alignment*.

Interfaces are physical at the lower Tech Levels (electrodes, bulky headwear) but become lighter with increasing technology, including lightweight sensory caps and patches. At the highest Tech Levels, interfaces become non-invasive, including neural tendrils, which are invisible 'cords' transmitted from a device to the subject's brain. These are application of the same technology that provides neural activity scanners, described in the Sensors section of the *Traveller Core Rulebook*. Some of the more advanced TL15 interfaces can transmit a simulation experience to a sophont from great distance, several hundred kilometres or more.

Environments describe the conditions the sophont must have in order to enter a sim. At the lower Tech Levels, a quiet, sensory-deprived environment is required. The equipment is too delicate at these levels and they often work best in a silent, dark place where outside stimuli are eliminated. With advances in technology, the environment becomes more flexible and the interface can operate just about anywhere, sometimes even blocking outside stimuli so that a sophont in a sim cannot be extricated without pausing or shutting down the device. At TL15+, there are no limitations and sophonts can potentially experience a sim while also operating in objective reality. For safety reasons, participants usually remain in a safe, stable environment but technological advancements enable the sophont to experience a sim from virtually anywhere.

Requirements describe additional factors and limitations, including whether or not the sophont must be drugged, sedated or immobilised while in the sim.

WHY GO INTO A SIM

Simulations can be used for many things. Storage and testing are the most mundane uses. They are a place to store artificial and conscious intelligences, or consciousness file instances, where they can be run through basic testing to ferret out code errors, determine their robustness and assess baseline capabilities. Storage sims generally do not allow full sentience to stored instances, while more complex sims might offer their stored instances the full gamut of experiences.

Sims are important to this campaign because they enable the Travellers to interact with powerful conscious intelligences in an environment that both can share. A simulation can be used to level the playing field, enabling sophonts to operate on the same level as machine intelligences whose perception of reality vastly differs from their own.

When a sophont sends a consciousness file into a sim or configures a sim interface so that they can interact with conscious intelligences in real time, there are two key elements to the experience: Objectives and metaphor.

Objectives are things the Travellers hope to accomplish in the sim. When an agent dives into a sim, they are entering a digital medium, a realm of ones and zeroes that conceptually resembles a perceivable reality. Within that reality, things can be accomplished, be that basic communication with another digital entity or something more concrete, like determining a host's motives, asking it to do something, diagnosing problems like an exploratory surgeon, or correcting or excising issues in its code. Agents who only have read privileges can only view the programming of the sim but those with write privileges can temporarily alter or permanently reprogram aspects of the sim.

Metaphor is the mode of communication, the agreed upon concepts of the realm into which the Travellers enter. When the Travellers' consciousness files meet in the sim to conduct pre-mission business at the various Express Boat Network data centres, the metaphor can be something as simple as a meeting room with chairs and tables. As they become more proficient and imaginative, the metaphor can become something more abstract, like converting the Travellers into a collection of energy pulses, floating in the glistening ethereal realm of a gas giant's upper atmosphere, or a collection of subatomic particles orbiting one another. The metaphor can be symbolic for the mission or simply some whimsy dreamed up by the Travellers. They will not always require a meeting before missions but for those times that they do, let the Travellers determine the metaphor, taking turns in subsequent pre-mission meetings.

The metaphor becomes infinitely more complex when in a realm that has been devised by a more advanced intelligence such as Naalir, or one of the other featured intelligences described in Conscious Intelligence Projects on page 13. It might be a surreal experience, filled with abstract shapes, structures and personalities but such a realm can be quite difficult to describe, so it is recommended to keep it limited to something the Travellers can all imagine and understand. The metaphor might be something historical like the Roman Empire in 100 B.C., Terra during the Interstellar Wars, or Capital at the dawn of the Third Imperium. It might represent some fantasy realm populated by knights, castles, monsters, dragons, faeries and elves. It could be something more mundane like a suburban neighbourhood, where everything seems placid and normal, until perceived reality starts to split at the seams, revealing secrets and terrors that lie within.

Going into a sim is a departure from typical game play and must be done judiciously. *Traveller's* genre is firmly in the realm of space opera, not cyberpunk. However, this campaign has an unusual array of characters: Conscious intelligences that cannot be communicated with or related to in the same manner that a biological patron, Contact, Rival, Enemy or Ally can. Sometimes it is necessary to enter the sim to resolve situations that cannot occur in the objective reality of the Charted Space universe.

HOW TO REFEREE THE SIM

The rules of each sim vary. If the Travellers enter a sim for communication purposes only, it can be treated as simply a virtual 'breakout room', a place where they can go to conduct a confidential or pre-mission briefing. However, if they are there to achieve a goal that is contrary to other entities within the simulation or they oppose the host of the sim itself, then things can become dangerous, even lethal.

The rules of each sim must be decided upon by the Referee. Interactions and combat are conducted much as they are in objective reality. Start with the standard rules for combat and other hazards as a baseline, with the understanding that things that happen in a sim are metaphors for things that happen in reality. In the scenarios and adventures of this campaign that use simulations, any additional rules will be explained. Sim in this campaign are described in the Sim Types table.

Entrance and participation for each of the sim types will also have different consequences. In some sims, deep neurological connections must be established for an agent to explore and affect the conceptual medium that the host has provided. In others, the Travellers must put themselves physically at risk to achieve their objectives.

There are three degrees of immersion, each of which has different physical consequences: Passive Participant, Active Participant and Neuro-linked Participant. Consciousness files and linked sophonts can be Passive and Active Participants but only living sophonts can be Neuro-linked Participants.

Sim Types

Sim Type	Description	Example
Pod	Tightly defined and secure metaphor with limited structure, scope and mobility.	A pre-mission meeting room within the substrates of an x-boat station mail array.
Mirror	Broadly defined realm with limited boundaries, complex structures, a reasonably large scope and enhanced mobility.	A castle with dozens of rooms within which intelligences can interact, resolve issues, speak privately and establish rules and boundaries.
World	More broadly defined realm with expanded boundaries, vastly more complex and numerous structures, an enormous scope and virtually unlimited mobility.	An entire planet with detailed cities, rural areas, natural landscapes and life forms.
Universe	Seemingly endless realm with virtually limitless boundaries, infinitely complex and varied structures, and unlimited mobility.	Multiple star systems, possibly numbering in the hundreds, each with an array of worlds that fit the description of the World sim type.

SIM TIME

Simulations can be conceptual or temporal. Conceptual sims do not consume time, at least not in a conventional manner. They are a representational state, a static concept in which simulated consciousnesses can operate but not accomplish objectives or goals. For example, a consciousness might enter a sim that contains the entire texts of the Argushiigi Admegulasha Bilanidin, the renowned archives of the ancient Vilani Ziru Sirka, in some sort of graphical representation. As a simulated consciousness in such a sim, one could read thousands of pages of text without a notable passage of time. The consciousness would merely absorb the information, potentially reintegrating it into the mind of the source sophont.

Temporal sims consume a perceived and *real* passage of time, although the two might not be the same. For example, a simulated consciousness might enter a sim that has the Travellers reenact the Battle of Zhimaway, playing the part of Grand Admiral Arbellatra Alkhalikoi's fleet officers. While the actual battle took a few hours, the sim might take a few microseconds to run, enabling the consciousness to review the historical battle and consider how to optimise the actions taken by the admiral. Simulated consciousnesses might not be aware of the actual passage of time, nor might it be important to them. They might not even know they are in a sim. It all depends on the design of the simulation.

A Traveller or consciousness file that spends time in the sim, no matter how long the passage of time they perceive, acclimates to real time after they re-emerge in objective reality.

PASSIVE PARTICIPANT

The Traveller can view and participate in the simulation as an agent on a superficial level including communication with the host and other agents but they cannot affect change, or influence or alter programming in any way.

ACTIVE PARTICIPANT

The Traveller can view, participate and affect change in the simulation as an agent, including communication with the host and other agents. They can establish private connections with other agents intercept communications from opposed agents, and affect their programming if equipped with the appropriate software. The Traveller can affect the host's programming or that of other intelligences only if given permission to do so. Active participation requires a non-invasive neural link.

Damage incurred within the sim is the equivalent of Stun damage with the Traveller's INT score serving in place of END. If the Traveller's INT is reduced to zero, they become 'unconscious' and are knocked out of the sim, and they are incapacitated and unable to perform any actions for a number of rounds equal to the damage that exceeded their INT. Damage received in Active Participant sims is completely healed after one hour of rest.

NEURO-LINKED PARTICIPANT

Same as Active Participant immersion with the following additions: The Traveller can affect the host's programming or that of other intelligences whether or not they are invited to do so. Neuro-linked participation requires an invasive neural link.

If a Traveller incurs metaphorical damage within the sim, they take the equivalent of physical damage with the Traveller's INT, EDU and STY scores serving in place of STR, DEX and END. If it has not already been done, assign a STY to the source sophont as described in Sanity and Lifespan on page 88. Damage is incurred as follows:

Upon a successful attack, damage is rolled with the Effect of the attack roll added to the total. Damage is initially applied to a target's INT. If a target is reduced to INT 0, then any excess damage is deducted from either the target's EDU or STY (target's choice of which). If either EDU or STY are reduced to 0, the Traveller becomes unconscious and any further damage is deducted from the remaining mental characteristic.

If all three characteristics (INT, EDU and STY) are reduced to 0, the Traveller has been killed. They suffer the equivalent of a fatal cerebral aneurism. However, unconsciousness knocks the Traveller out of the sim just like stun does in an Active Participant immersion. Travellers may optionally depart the sim at any time if their characteristic points are low but the damage requires healing, as described in Healing in the *Traveller Core Rulebook*. First aid may not be applied since the Traveller's wounds are internal, unless the Medic has access to an autodoc or other device or drug that can conceivably treat nervous system damage.

After treatment, an injured Traveller may re-enter the sim at their own risk but unless they are fully healed by the medical treatments described above, their wounds will be the same as when they left the sim.

Damage incurred to the Traveller's mental characteristics reduces their characteristic DMs the same way it does during physical combat. Loss of INT reflects a reduction of mental sharpness, loss of EDU indicates that the Traveller loses the ability to access memories or use knowledge to solve problems and loss of STY causes mental health issues.

COMBAT

In a simulation, combat is all about perception. Conceptual battlefields are imposed by hosts upon agents within the sim. If the simulation is neutral, meaning no host is operating it, then the battlefield is conceptually agreed upon by all parties in the sim. A process of mental accounting is conducted by the sim and the perceived environment is assembled from the intelligences and consciousnesses that are participating in the conflict. Two opposing sides might perceive the 'field of battle' differently but the end result is the same. For example, one combatant might imagine wearing medieval armour and using crossbows as ranged weapons, while the other might envision TL8 body armour and assault rifles.

Conveying such a fluid environment to the Travellers requires some creativity. To keep things simple, the Referee may simply describe a battlefield, urban, rural, modern, ancient or otherwise, and then conduct combat as normal.

If a host is running a sim, it can attempt to alter the rules at any time, reducing ranges, removing conceptual barriers or otherwise changing the environment. If the combat occurs in an Active

Participant immersion, these things can be done to an agent in a single combat round and cannot be prevented. The host holds complete sway over Passive and Active Participants. If the combat occurs in a Neuro-linked Participant immersion, then linked Travellers can make an opposed Electronics (computers) check to thwart the host and prevent the changes from happening. Sim hosts are assigned skills for the purpose of making opposed checks.

Objectives can be achieved by creating an abstraction that symbolises the actions being taken. For example, if the host of the sim has planted a nuclear weapon in a hidden location in objective reality – therefore, outside the sim itself – then in the sim, finding the code that controls the detonator might be locked in a metaphorical vault, hidden in a maze or some other puzzle that the Travellers must solve. The possibilities are endless but the Referee must take care to present consistent and solvable challenges. In spite of the fact that a genius-level conscious intelligence could seemingly outwit the Travellers at every turn, keep in mind that within the sim, the Travellers have special powers. Their thought processes have been boosted by neural gear, consciousness files and possibly the assistance of Naalir itself, so there should be no unachievable objectives. Challenging, yes, but not impossible. The sim is ultimately a narrative device with which to challenge the Travellers and convey the sense that they are interacting with powerful AIs and CIs on their own turf and that they have agency within that realm.

SKILLS AND TASKS

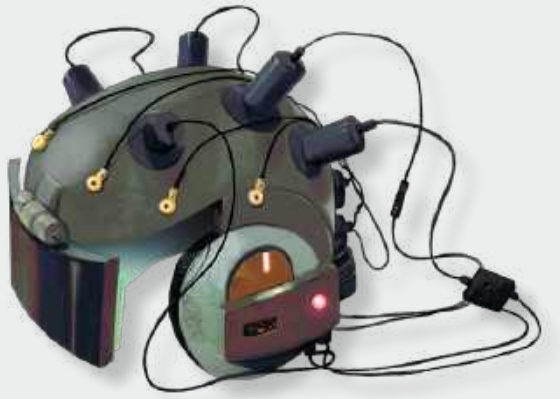
Administering task checks in a sim is much the same as in objective reality. Travellers may use their skills in a sim the same way they do normally. However, the host of a sim may occasionally change the rules in myriad ways that they must adjust to. For the Referee, this means being nimble but also maintaining a consistent narrative. Any conflict with a conscious intelligence on its own turf is going to be challenging and the Travellers might feel as if they are in direct conflict with the 'god of the realm' when operating in the sim but for the most part, they can pursue their objectives without interference.

If and when the Travellers come into direct opposition with the host, allow them to be creative. The Travellers are present in the sim because they have specific objectives or a desire to communicate with the host. Creative use of their skills and characteristics should be rewarded with chances to achieve success, provided that the dice cooperate.

CENTRAL SUPPLY CATALOGUE

Access to a simulation requires a neural linking device, described below as non-invasive or invasive.

Non-invasive Neural Link: Essentially a purpose-built neural link, this device enables a person to enter a simulation as a passive or active participant. It is an electronic device that ties into the nervous system, enabling nonlethal bidirectional feedback. See Passive Participant and Active Participant on the previous page for more information about the effects on a Traveller.



Item	TL	Kg	Cost
Non-invasive Neural Link	12	5	Cr250000

Invasive Neural Link: In order to oppose a host within a simulation, a deeper degree of penetration is required. An invasive neural link enables a person to enter a simulation as neuro-linked participant. This tool gives a Traveller the ability to make opposed checks against the host, albeit with greater physical risk. See Neuro-linked Participant on the previous page for more information.

Item	TL	Kg	Cost
Invasive Neural Link	13	2	Cr500000

SOFTWARE

In addition to the software packages listed in the Central Supply Catalogue, software may be used exclusively in the sim. Costs are shown as normal but these software packages are unlikely to be found on the open market and are therefore provided to give a sense of the value and complexity of the programs. Access to these software packages will most likely occur as part of the narrative, with Naalir (or other conscious intelligences) giving them to the Travellers over the course of the campaign. In a few cases, they might be purchasable but only on the black market of a high-tech world.

Armour: A security package that reduces damage taken by Travellers in Active Participant and Neuro-linked Participant immersions. Armour may be metaphorically presented in the mode desired by the Traveller. Hosts and agents will know the Traveller has armour software in the Armour/1 and Armour/2 software packages but it may be concealed in the more advanced Armour/3 and Armour/4 versions.

Neural Array: Container software that holds other software packages like a physical computer in objective reality. Unlike an actual computer, a neural rig contains all of the software available to the Traveller while in a simulation. Multiply the Traveller's INT by the software level to determine total storage capacity. Note that if a Traveller engages in combat, and loses points of INT as a result, their storage capacity is also temporarily reduced.

Stealth: Enables a Traveller to be present as an agent within a sim without the host knowing they are there. The Traveller must make an opposed check against the host's INT when attempting to complete key objectives (for example, engaging in combat, decrypting a metaphorical impediment, reprogramming part of the sim). Success indicates that they accomplish their task without the host noticing. Failure means the host can see them. To re-establish stealth, they must leave and then re-enter the sim.

Software	Bandwidth	TL	Cost	Description
Armour/1	2	13	Cr20000	Provides Protection +2 to Active and Neuro-linked Participants
Armour/2	4	14	Cr50000	Provides Protection +4 to Active and Neuro-linked Participants
Armour/3	8	15	Cr150000	Provides Protection +9 to Active and Neuro-linked Participants
Armour/4	12	16	Cr300000	Provides Protection +16 to Active and Neuro-linked Participants

Software	Bandwidth	TL	Cost	Description
Neural Array/1	—	13	Cr50000	INT x1 software storage capacity
Neural Array/2	—	14	Cr100000	INT x2 software storage capacity
Neural Array/3	—	15	Cr200000	INT x3 software storage capacity
Neural Array/4	—	16	Cr300000	INT x4 software storage capacity

Software	Bandwidth	TL	Cost	Description
Stealth/1	1	13	Cr100000	DM+1 to avoid detection in opposed check
Stealth /2	2	14	Cr200000	DM+2 to avoid detection in opposed check
Stealth /3	4	15	Cr400000	DM+3 to avoid detection in opposed check

Software	Bandwidth	TL	Cost	Description
Weapon/1	2	12	Cr10000	Inflicts 1D damage
Weapon /2	4	13	Cr20000	Inflicts 2D damage
Weapon /3	6	14	Cr40000	Inflicts 3D damage
Weapon /4	8	15	Cr80000	Inflicts 4D damage

Weapon: Enables a Traveller to instantly procure a metaphorical weapon that may be used within a sim in Active Participant and Neuro-linked Participant immersions. In Active Participant sims, the weapon inflicts Stun damage. In Neuro-linked Participant sims, the weapon inflicts physical damage. The metaphor is projected by the Traveller's consciousness and perceived by other hosts and agents as depicted by the Traveller.

HACKING AND INTRUSION

Breaking through secure constructs in the sim requires hacking and intrusion skills and tools. The primary skill for hacking is Electronics (computers) but other skills also apply in the conceptual realm of the sim. Knowing how to be stealthy or reconnoitre a site applies in simulations just as they do in objective reality.

When the Travellers encounter a secure conceptual construct, or a host is using aspects of the sim to attack or impede them, they can use their real-world skills to tackle any of the challenges before them. In all instances, Electronics (computers) may be used as the first part in a task chain, adding the Effect of a successful check to the subsequent roll. This reflects a skilled computer programmer's ability to recognise the underlying code and to help craft a proper response or counterattack.

SPYING ON A SIMULATION

Should one or more of the Travellers want to reduce their participant immersion level, they can do so with a single action (one Major Action in a combat round). For example, if the Travellers are in combat within a simulation and one of them takes damage but remains conscious, they can optionally reduce their participation level from neuro-linked to either active or passive. This way, they avoid taking any additional damage during combat. Of course, their reduced participation level means that they cannot affect the environment like they could when neuro-linked.

A Traveller at reduced participation level essentially becomes a 'spy', able to watch the action in the sim but unable to contribute to any objectives the group has. They can continue to communicate with their fellow Travellers, providing them with moral support and assisting verbally. Travellers at reduced participation levels cannot use any skills that might affect the outcome of combat or other tasks. For example, they cannot make a Leadership check to assist their cohorts during combat or other actions. In addition, a host can kick them out of the sim at any time. Referees should let the narrative run with all of the Travellers involved when possible. However, if a Traveller operating at reduced immersion level proves to be a nuisance to the host, removal from the sim is likely.

ONWARD TO SINGULARITY!

The information in this sourcebook is intended to serve as a centralised repository for information that might become difficult to find if located within the campaign books themselves. That said, each campaign book builds upon the information contained here, adding to it as necessary to assist the narrative or establish sensible modifications and enhancements to the rules.

The other campaign books provide a sequential series of acts, much like a play or film. While each act has scripted events and plot elements, there is also a considerable amount of agency for the Travellers to make the campaign their own. The first step is to dive into *Singularity Act 1: Sylean Dream*, in which the Travellers receive a lucrative offer to serve as the crew of the *Ventura Fortuna*.

VENTURA FORTUNA HANDOUT

CLASS: TYPE-MX

Ventura Fortuna is a Type-MX subsidised liner, with the 'X' indicating 'extra', although some say it should stand for 'exorbitant' or 'extraordinary' given its unusual accoutrements and quirkiness. Like some other subsidised liners, the ship features the height of luxury and elegance. The ship can carry 13–30 passengers (depending on occupancy) in addition to its crew. The ship's three-parsec jump capability commands higher passenger and freight fees, and allows less-desirable ports to be bypassed. With no fuel purification plant of its own, the liner is limited to systems with Class A and B starports, both of which carry refined fuel. The hull of the ship itself is only partially streamlined but its launch allows passengers to be ferried to the surface of a world, or act as a lifeboat in emergencies.

TL15		Tons	Cost (MCr)
Hull	600 tons, Standard	—	30
M-Drive	Thrust 2	12	24
J-Drive	Jump 3	50	75
Power Plant	Fusion (TL15), Power 305	15.25	30.5
Fuel Tanks	J-3, 4 weeks of operation	182	—
Bridge		20	3
Computer	Computer/10bis	—	0.24
Sensors	Civilian Grade	1	3
Weapons	Double Turrets (accurate, high yield pulse lasers) x2	2	7
	Double Turret (sandcasters)	1	0.5
	Pop-up mountings	3	3
Craft	Docking Space (20 tons)	22	5.5
	Launch	—	2.83
Systems	Biosphere	1	0.2
	Gourmet Kitchen (12 diners)	12	2.4
	Hot Tub (4 seats)	1	0.012
	Swimming Pool	8	0.16
	Theatre	8	1.6
	Wet Bar	—	0.002
	Medical Bay	4	2
	Studios (shops, salons) x2	8	0.8
	Training Facilities (gym)	4	0.8
	Vault	10	5
Software	Manoeuvre	—	—
	Library	—	—
	Intellect	—	—
	Jump Control/3	—	0.3
Staterooms	Standard x7	28	3.5
	High x10	60	8
	Luxury x4	40	6
	Emergency Low Berth	1	1
Common Areas		34	3.4
Cargo		72	—

Crew

Captain, Pilot, Astrogator, Engineers x2, Gunners x3, Stewards x6, Medic

Hull: 240

Running Costs

MAINTENANCE COST

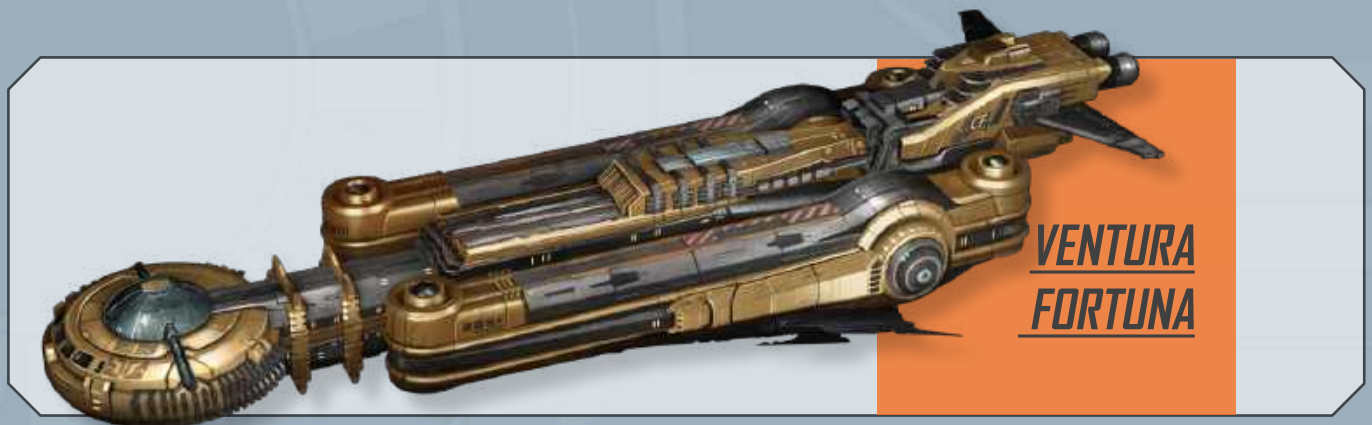
Cr18312/month

PURCHASE COST

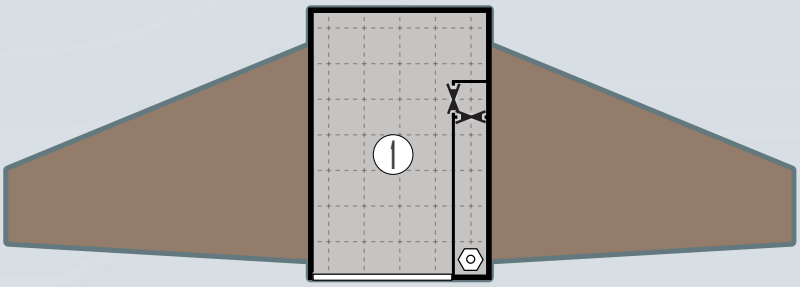
MCr219.744

Power Requirements

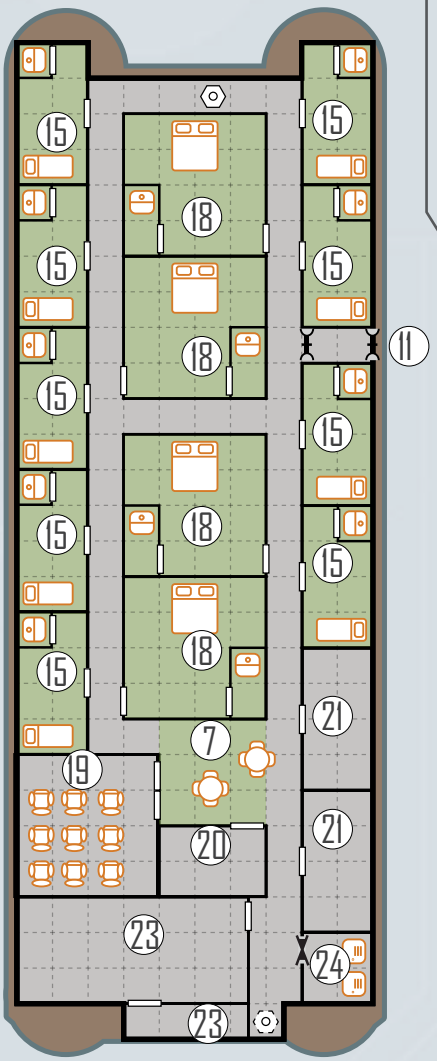
Basic Ship Systems	120
Manoeuvre Drive	120
Jump Drive	180
Sensors	1
Biosphere	1
Medical Bay	1
Low Berths	1
Weapons	19



VENTURA FORTUNA



DECK 4

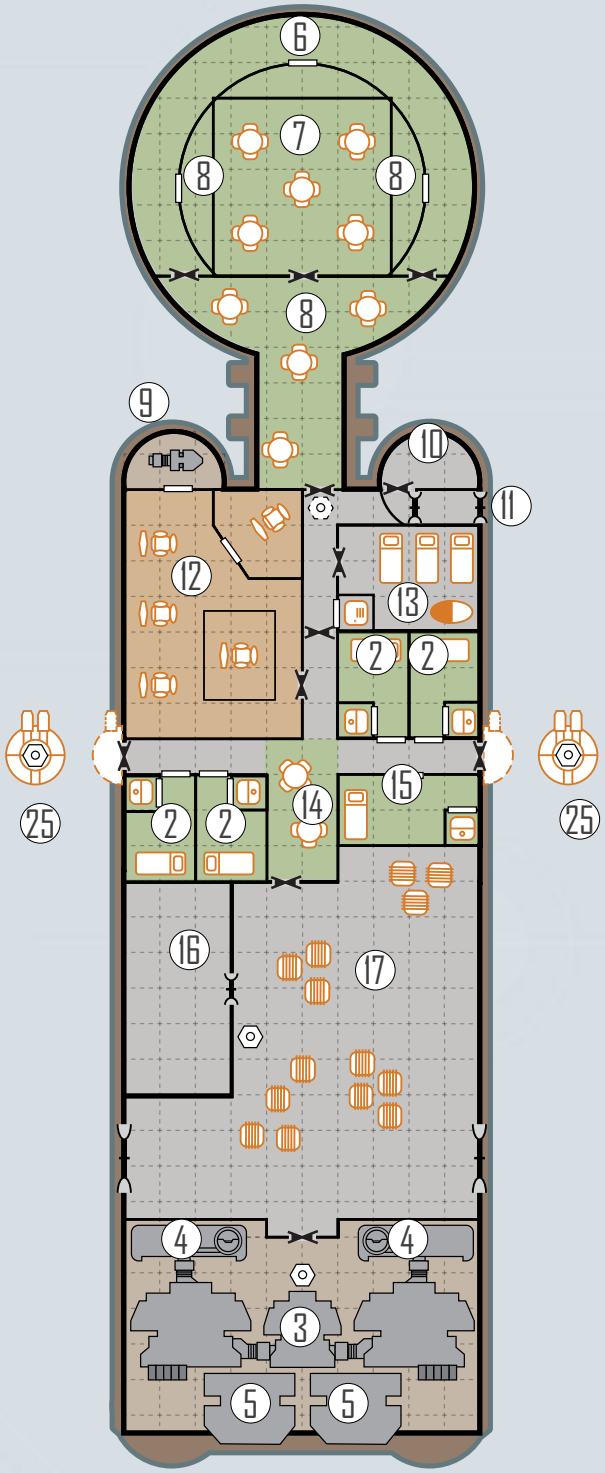


DECK 3

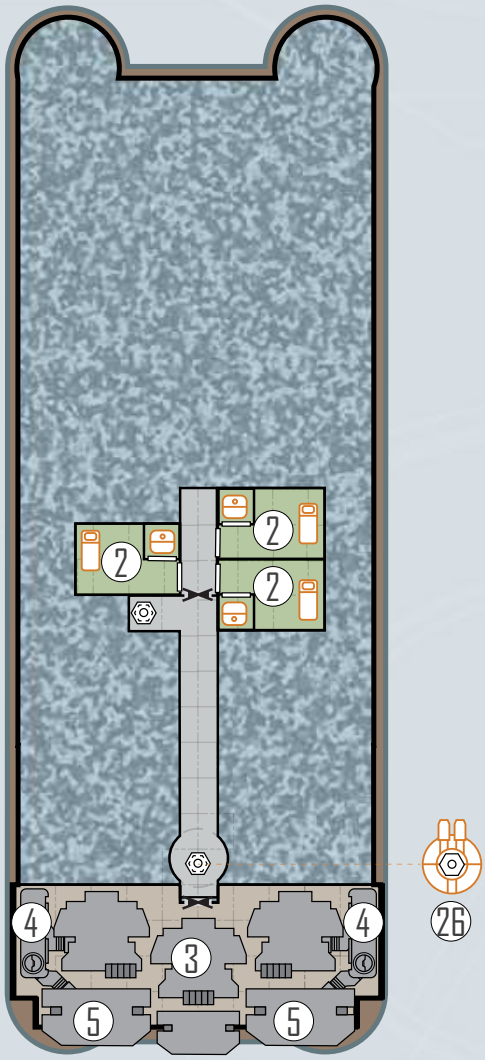
LEGEND

1. Launch docking space
2. Stateroom
3. Jump drive
4. Power plant
5. Manoeuvre drive
6. Gallery
7. Kitchen and dining area
8. Passenger commons
9. Sensors
10. Biosphere
11. Airlock
12. Bridge
13. Medical Bay
14. Crew commons
15. High stateroom
16. Vault
17. Passenger cargo hold
18. Luxury stateroom
19. Theatre
20. Gym
21. Studio
22. Swimming pool
23. Hot tub
24. Passenger ship's locker
25. Turret

VENTURA FORTUNA



DECK 2



DECK 1

1 square = 0.5 Ton